

**EFFECTIVENESS OF HANDS ON TRAINING ON KNOWLEDGE AND SKILLS  
REGARDING BASIC LIFE SUPPORT AMONG FINAL YEAR B.Sc. NURSING  
STUDENTS**



**BY**

**301312203**

**A DISSERTATION SUBMITTED TO THE TAMILNADU  
DR. M.G.R. MEDICAL UNIVERSITY, CHENNAI,  
IN PARTIAL FULFILLMENT OF THE  
REQUIREMENTS FOR THE DEGREE  
OF MASTER OF SCIENCE  
IN NURSING**

**OCTOBER 2015**

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*Certified that this is the bonafide work of*

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**OCTOBER 2015**

**A STUDY TO EVALUATE THE EFFECTIVENESS OF HANDS ON TRAINING  
ON KNOWLEDGE AND SKILLS REGARDING BASIC LIFE SUPPORT  
AMONG FINAL YEAR B.Sc. NURSING STUDENTS**

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**OCTOBER 2015**



## **DECLARATION**

I hereby declare that the present dissertation titled “**A study to evaluate the effectiveness of hands on training on knowledge and skills regarding Basic Life Support among final year B.Sc. Nursing students in Annammal College of Nursing, Kuzhithurai at Kanyakumari District**” in selected Nursing colleges at kanyakumari district”, is the outcome of the original research work undertaken and carried out by me under the guidance of **Prof.Mrs.J.M.JerlinPriya M.Sc (N), Ph.D** Principal cum Professor in Department of Medical Surgical Nursing and **Mrs.Leonarth Mary.N M.Sc(N)**, Asst.professor in Department of Medical Surgical Nursing, Annammal college of Nursing, Kuzhuthurai. I also declare that the material of this has not found in any way, the basis for the award of any degree or diploma in this university or any other university.

**301312203**

**M.Sc. Nursing II Year**

## ACKNOWLEDGEMENT

I wish to acknowledge my heartfelt gratitude to the **Lord Almighty** for all the wisdom, knowledge, guidance, strength, protection, shield and support. He has offered me throughout this endeavour and given me courage to overcome the difficulties and thus complete this study successfully.

It is my honour to thank our beloved chairman **Dr. Sheeba Jayalal MBBS., DGO.,** for providing entire facility and encouragement for conducting this study.

I express my sincere gratitude to **Dr. Jayalal MS.,FICS.,DLS (Germany), MBA., FIAGES.,** Hon.Secretary of Annammal College of Nursing for giving me the precious opportunity to be a part of this esteemed institution.

I, consider myself to be privileged to express my honest and sincere gratitude to **Prof. Mrs. J.M Jerlin Priya, M.Sc.,(N),Ph.D** Principal cum Professor, Annammal College of Nursing, for her invaluable guidance, continuous support, promising criticisms, suggestion and concern during the entire course of this dissertation.

At this moment I convey my profound gratitude to **Mrs. Sujatha, M.Sc.,(N),** Vice Principal cum Class Coordinator, for her support which helped me in completion of this dissertation.

I extend my deepest gratitude to **Mrs.Leonarth Mary. N M.Sc.(N),** Asst professor in Medical Surgical Nursing for her constant source of inspiration, which was a key for the successful completion of this study.

I express my thanks to the **entire faculty of Annammal College of Nursing, Kuzhithurai,** for their co-operation and encouragement.

My sincere thanks and honour to **Mr. Anto John Britto, MSc, MED., MPhil, PG.,DBM.,** Professor of Bio statistics for extending his helping hands in the course of analysis of the data collected and interpretation.

I am very much grateful to **Mrs. Mary Shajitha** librarian of my college for her help in procuring books whenever required.

I thank all the **office staff** for their help in taking photocopies of study reviews.

I express my deep sense of gratitude and heartfelt thanks to the **experts** who have validated and edited my study and who devoted their valuable hours in solving my doubts and in providing meticulous attention.

I would like to express my thanks to the **study participants** for their co-operation and participation, without whom this study would have been impossible.

I express my heartfelt gratitude to my **family members** for their love, support and encouragement.

A word of thanks to **my colleagues** for their help and support throughout the course of this study

**301312203**

**MSc. (N) II YEAR**

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## **LIST OF ABBREVIATIONS**

<b>BLS</b>	- Basic Life Support
<b>CPR</b>	- Cardio pulmonary Resuscitation
<b>ACLS</b>	- Advanced cardiac life support
<b>AHA</b>	- American heart association
<b>ICU</b>	- Intensive care unit
<b>ECC</b>	- Emergency cardiovascular care
<b>OPD</b>	- Out patient Department
<b>AED</b>	- Automated external defibrillator
<b>SCA</b>	- Sudden cardiac arrest

## **CHAPTER I**

### **INTRODUCTION**

**“Emergencies can occur any time  
But a little teaching and training  
Can go a long way in saving lives”**

**-Richardson**

Nurses are an integral part of the health care system and are perceived knowledgeable in providing institutional care to the patients. Cardio Pulmonary Resuscitation (CPR) is an important medical procedure which is needed for individuals who face sudden cardiac arrest. It is the combination of rescue breathing and chest compressions which is delivered to the victims who are thought to be in cardiac arrest. The timely performed CPR can largely prevent sudden death and hence it is considered to be an important medical procedure.

Sudden cardiac death is a major clinical problem causing 300,000 to 400,000 deaths annually and 63% of all cardiac death. Despite the overall decrease in cardiovascular mortality, CPR is life saving procedure and it restores the normal pumping action of the people's heart.

The air we breathe in travel to our lungs where oxygen is picked up by our blood and then pumped by the heart to our tissues and organs. When a person experiences cardiac arrest-whether due to heart failure in adults and the elderly or an injury such as near drowning, electrocution or severe trauma in a child, the heart goes from the normal beat to an arrhythmic pattern called ventricular fibrillation, and eventually ceases to beat altogether. This prevents oxygen from circulating throughout the body. Cardio, (heart) Pulmonary, (lung) Resuscitation, (revive, revitalize) serves as an artificial respirator. CPR may not save the victim even when performed properly, but if started within 4 minutes of cardiac arrest and defibrillation is provided within 10 minutes, a person has a 40% chance of survival. CPR is a simple but effective procedure that allows almost anyone to sustain life in the first critical minutes of cardiac arrest.

CPR provides oxygenated blood to the brain and the heart long enough to keep vital organs alive until emergency equipment arrives. Compression is performed with the patient on a firm surface, such as floor, a cardiac board, or a meal tray. The rescuer (facing the patient side) places heel of his one hand on the tip of the xiphoid sternum, and position the other on top of the first hand. The finger should not touch the chest wall. Using force of the body weight while keeping the elbows straight, the rescuer quickly downward from the shoulder area to deliver a forceful compression to the victims' lower sternum about 3.8 to 5 cm towards the spine of a client. The compression rate should be 100 times per minute. The compression to ventilation ratio is 30:2 and is recommended without pause for ventilation.

CPR is only likely to be effective if commenced within 6 minutes after the blood flow stops, because permanent brain cell damage occurs when fresh blood infuses the cells after that time, since the cells of the brain become dormant in as little as 4–6 minutes in an oxygen deprived environment and the cells are unable to survive the reintroduction of oxygen in a traditional resuscitation. Research using cardioplegic blood infusion resulted in a 79.4% survival rate with cardiac arrest intervals of  $72 \pm 43$  minutes. Traditional methods achieve a 15% survival rate in this scenario, by comparison.

Modern CPR developed in the late 1950s and early 1960s. Though mouth-to-mouth resuscitation was described in the Bible (mostly performed by midwives to resuscitate newborns), it fell out of practice until it was rediscovered in the 1950s. In early 1960 Drs. Kouwenhoven, Knickerbocker, and Jude discovered the benefit of chest compression to achieve a small amount of artificial circulation. Later in 1960, mouth-to-mouth and chest compression were combined to form CPR similar to the way it is practiced today. Every year, almost 3, 83,000 out-of-hospital sudden cardiac arrests occur that's more than 1,000 a day. Almost 80 percent of sudden cardiac arrests happen at home and are witnessed by a loved one. Currently, less than 12 percent of victims survive sudden cardiac arrest.

In 1960 the three investigators reported their findings on 20 cases of in-hospital cardiac arrest in fourteen of the 20 patients (70%) survived and were discharged from the hospital. Many of the patients were in cardiac arrest as a result of anesthesia. Three patients were documented to be in ventricular fibrillation. The duration of chest compression varied from less than 1 minute to 65 minutes. CPR from a trained instructor will prepare to act quickly and confidently who save the life of the person.

## **BACKGROUND OF THE STUDY**

Early initiation of Basic life support (BLS) with Cardiopulmonary resuscitation (CPR) is an important contributory factor in the survival of Cardiac arrest. The fundamental aspects of BLS include immediate recognition of sudden cardiac arrest (SCA) and activation of the emergency response system, early CPR, and rapid defibrillation with an automated external defibrillator (AED).

Effective and timely CPR reduces the likelihood of death following sudden cardiac arrest. Adequate knowledge and skills regarding BLS and appropriate application of the same is an essential requisite for nursing students. Thus the aim of the present study was to evaluate the hands on training on knowledge and skills regarding basic life support.

According to World Health Organization (WHO), cardiovascular diseases (CVD) are the number one cause of death globally. More people die annually from CVDs than from any other cause. An estimated 17.1 million people died from CVD in 2014, representing 29% of all global deaths. Of these deaths, an estimated 7.2 million were due to coronary heart disease and 5.7 million were due to stroke. Low and middle income countries are disproportionately affected. 82% of CVD deaths take place in low and middle income countries and occur almost equally among men and women. By 2030, almost 23.6 million people will die from CVDs, mainly from heart disease and stroke. These are projected to remain the single leading cause of death.

Cardiopulmonary resuscitation (CPR) is a technique of Basic Life Support for the purpose of oxygenating the brain and heart until appropriate. Definite medical treatment can restore normal heart and ventilator action. Globally, the incidence of out-of-hospital cardiac arrest ranges from 20 to 140 per 100 000 people, and survival ranges from 2% to 11%.

In the United States, according to American Heart Foundation, about 75% to 80% of all out of hospital cardiac arrest happens at home. Approximately 95% of sudden cardiac arrest victims die before reaching the hospital, if CPR is not provided a sudden victim's chances survival fall 7% to 10% for every minute. If CPR was initiated earlier, there is greater chance of survival from 100,000 to 200,000 lives of adult and 92,000 of the people saved in each year.

In India the annual incidence of sudden cardiac death accounts for 0.55 per 1000 population. The survival rate of a sudden cardiac arrest is almost less than 1%. Many studies show that the knowledge of the nurses was found to be low, thus suggesting a need for educational interventions.

**Ravinder (2013)** conducted a one group pre-test post-test study to evaluate the 'effectiveness of planned teaching programme on cardiopulmonary resuscitation (CPR) technique. The sample of the study comprised of 30 students studying in B.Sc. Nursing in a selected College. Simple random technique was used to draw the samples. A structured closed ended questionnaire was prepared to assess the knowledge level and an observation checklist was used to evaluate the skill concerning CPR technique of the degree students to evaluate the effectiveness of Pretest-Posttest. Reliability ( $r = 0.88$ ) of the tool was tested by split half technique and Karl Pearson Co-efficient correlation formula. The data collected from the respondents was analyzed by using descriptive and inferential statistics. Further, effectiveness of Pretest Post test was tested by inferential statistics using paired 't' test. The difference between pre-test and post-test knowledge scores of degree students on CPR technique was found to be very highly significant. The Pretest Posttest was found to be an effective strategy in increasing the knowledge of students. Hence it was inferred that effective teaching will increase the knowledge of the students and survival of one's life.

**Mani (2014)** conducted descriptive, cross-sectional study among 241 undergraduate medical students of a medical college in Tamil Nadu, between May and July 2014, using a pretested, semi-structured questionnaire devised based on American Heart Association Guidelines for BLS and CPR 2014. It shows that mean knowledge score of the participants was  $4.55 \pm 1.21$ . Out of a possible high score of 6, the level of knowledge and attitudes related to BLS varied depending on the year of study, and this difference was statistically significant ( $p < 0.05$ ). The knowledge score decreased with increasing duration of training. The higher the year of study, the more positive the participants' attitudes were. Only 12.9% of the participants had ever practiced BLS. Twenty-one (21) participants (8.7%) expressed reluctance about performing BLS in a hospital setting, and 57.3% of the participants expressed reluctance about performing BLS in an out-of-hospital setting. Fear of acquiring infection, causing harm to the victim, and lack of confidence were the common causes for participant's reluctance.

Successful resuscitation following cardiac arrest requires an integrated set of coordinating actions that includes the following

- Immediate recognition of cardiac arrest and activation of the emergency response team.
- Early CPR with an emphasis on chest compressions.

Assessment of knowledge regarding CPR technique among degree students and teaching them about CPR technique was the main concept of the study. This will help students to gain knowledge and skills regarding CPR technique. Most of the degree students' knowledge was not up to the mark before. The PTP among degree students facilitated them to learn more about CPR technique.

In the post-test knowledge and skills scores, many study showed that PTP was very effective in improving the knowledge of degree students regarding CPR technique. Health teaching is an integral part of nursing and it emphasis a scientific attitude towards health, which is very important to modern healthy living. Planned health teaching of the masses is one of the most effective means of health promotion; hence the investigator has chosen this present study.

### **NEED FOR THE STUDY**

Cardiovascular diseases remain the most common cause of death in developed countries and are increasing in number in developing countries. About 48% of all the deaths were due to cardio vascular diseases. The death rate was 35%, but 68% of these deaths occurred before reaching the hospital. Approximately 1,00,000 people die annually as a result of accidents such as drowning, suffocation, electrocution, drug overdose, automobile accidents, fires and poisoning. Medical research and practical experience confirms that a significant number of these fatalities estimated at approximately 20% could have been prevented if prompt and proper Cardiopulmonary Resuscitation has been applied. An effective CPR from a bystander can double a victim`s chances of surviving a cardiac arrest.

The AHA (American Heart Association) Guidelines for CPR and ECC (Emergency Cardiovascular Care Committee) once again emphasize the need for high-quality CPR that includes, A compression rate of at least 100/min (this is a change from “approximately” 100/min), A compression depth of at least 2 inches (5cm) in adults, and

a compression depth of atleast one third of the anterior-posterior diameter of the chest in infants and children. This is approximately 1 1/2 inches (4cm) in infants and 2 inches (5cm) in children. Allowing complete chest recoil, minimizing interruptions in compressions and avoiding excessive ventilation continue to be important components of high-quality CPR.

Nursing students must acquire specialized skills in CPR Techniques. Nurses are responsible for identifying emergency situations and to initiate methods for treating emergency situation. Each nurse should be aware of emergency situation, medication, methods of CPR, rate and depth of compressions.

**Srinivas nalini (2013)** has taken a survey of Basic Life Support among final year students. A cross-sectional study was conducted from April to May 2013 among Medical, Dental and Nursing students. A questionnaire was given interrogating them regarding various aspects of awareness and skills involved in BLS. The data was analyzed using software version Statistical Package for Social Sciences (SPSS) 12.0. Demographic data were analyzed using analysis of variance. Unpaired t-test and Chi-square tests were used where appropriate. Sample size of 500 was determined. Standard tests of significance were applied to determine the  $P < 0.05$  was considered significant. In this study, more than half of the Medical students had fair knowledge of the basics in BLS. Poorer number of students had a general idea about the skills and techniques used in BLS. Response during an emergency real life situation was low among the respondents and it was found that the students considerably lagged behind in the knowledge of cognitive and practical skills of BLS. So the author concluded that awareness regarding BLS among the study groups was varied and was generally poor, which calls for standardizing training in BLS and making it a mandatory part of all Medical and Paramedical teaching program.

**Endale and Bernard Andersan (2011)** conducted a study about the knowledge level of final year undergraduate Health Science students and Medical Interns about Cardio Pulmonary Resuscitation. In his findings, he states that the knowledge of Nursing students and Interns about BLS was very poor. Several authors described the problem of poor performance in CPR, even when provided by Medical Professionals. Numerous investigations have reported the problem of poor skills retention after various CPR courses. Studies reporting the need for improvement of resuscitation techniques led to the recent changes in BLS. Early initiation of CPR improves the chance of successful resuscitation and survival. Basic Life Support training is highly essential for all health



care staff members; especially to those who are working in Emergency and Critical care units because protocol based management avoids confusion, wastage of time which in turn can save many lives. Nurses play an important role in emergency management. In order to have efficient, qualified and skilled nurses, it should mainly focus on nursing educational system and the process of Basic Life Support training should start from the student nurses because they are the future back bone of the hospital that will render services during the emergency. So the investigator had thought to take research based on Basic Life Support that provide knowledge to student nurses who are professionally qualified for tomorrows need and they are always in the patients unit observes first when patient collapses which in turn can save lives of many by appropriate interventions.

Discussion with the experts also helped the investigator to realize that it is needed. The investigator therefore strongly believes that, this study is needed and will be useful for the nursing students. Hence the particular topic was selected for research.

### **STATEMENT OF THE PROBLEM**

A study to evaluate the effectiveness of hands on training on knowledge and skills regarding Basic Life Support among final year B.Sc. Nursing students in Annammal College of Nursing, Kuzhithurai at Kanyakumari District.

### **OBJECTIVES**

- To assess the pretest and posttest level of knowledge and skills regarding Basic Life Support among final year B.Sc. Nursing students
- To evaluate the effectiveness by comparing the pretest and posttest level of knowledge and skills among final year B.Sc. Nursing students
- To find out the association between the posttest level of knowledge and skills regarding Basic Life Support among final year B.Sc. Nursing students with their selected socio demographic variables.

### **HYPOTHESES**

- H<sub>1</sub>**     There will be a significant difference between the pretest and posttest level of knowledge and skills regarding Basic life support.
- H<sub>2</sub>**     There will be significant association between the posttest level of knowledge and skills with selected socio-demographic variables.

## **OPERATIONAL DEFINITIONS**

### **Evaluate**

In this study, it refers to the measurement of knowledge and skills by using structured Questionnaire and Observation Check list.

### **Effectiveness**

In this study, it refers to the extent to which the Hands on Training on Cardio Pulmonary Resuscitation improves the level of knowledge and skills of final year B.Sc. Nursing students which would be evidenced by the differences in the pretest and posttest level of Knowledge and skills.

### **Knowledge**

In this study, it refers to the response given by the final year B.Sc. Nursing students regarding Hands on Training on Cardio Pulmonary Resuscitation as measured by Structured Questionnaire.

### **Skills**

In this study, it refers to the ability to carry out the Hands on Training on Cardio Pulmonary Resuscitation.

### **Hands on Training**

In this study, Hands on Training refers to simulation technique adopted to impart knowledge and skills.

### **Basic life support**

It is an emergency lifesaving procedure that should be during cardiac or respiratory arrest.

## **ASSUMPTIONS**

- It is assumed that most of the final year B.Sc. Nursing students may have some knowledge and skills regarding Basic life support.
- It assumed that the knowledge and skills of the final year B.Sc. Nursing students will be enhanced after Hands of Training of Basic life support.

## **DELIMITATIONS**

The study is delimited to:

- final year B.Sc. Nursing students.
- 60 samples only
- the period of data collection for 4 weeks

## **CONCEPTUAL FRAMEWORK**

Theories are linked to the real world through definition that specifies how concepts will be known experienced, observed and measured. Theories guide decision-making by providing the supporting conceptualization for the study such as significance of the problem and background of the problem. Thus theory is an abstract generalization that presents a systematic explanation about the relationship among phenomena.

Concept is defined as a complex mental formulation of an object properly derived from individual perception and experience.

Conceptual framework is interrelated concepts or abstractions that are assembled together in some rational scheme.

The conceptual framework selected for the present study was based on “General system theory by LudwingnVon Berlanffy (1968). General systems theory explains that, a system is a set of interrelated elements. The interrelated elements in the abstract system are the human beings and their environment. As a living system and energy field, the individual is capable of taking in energy and information from the environment. Because of this exchange, the individual is as open system, an underlying assumption and building block. All living systems are an open system, which means that they exchange energy, matter and information across these boundaries with the environment. Survival in a system must achieve balance internally and externally. According to General system theory,” science of wholeness and its purpose is to unit scientific thinking across the discipline and which provides framework for analysing the whole of any system”. The system has a specific purpose or goal and uses a process to achieve that goal. A system activity can be resolved into an aggregation of feedback circuits such as

- Input
- Through put
- Output

### **INPUT**

It refers to any information, energy or material that enters into the system through its boundaries. In this study, input refers to students, sex, and education.

## **THROUGHPUT**

It refers to the process whereby the system transforms, create and organizes input. In this study, throughput refers to the assessment of knowledge and skills.

## **OUTPUT**

It refers to energy, information or matter that is transferred to the environment. In this study, output refers to effectiveness of teaching and the level of knowledge and skills towards CPR.

## **SUMMARY**

This chapter has dealt with the background of the study, need for the study, statement of the problem, objectives of the study, assumptions, operational definitions, hypotheses, inclusion and exclusion criteria, delimitations and conceptual frame work of the study.

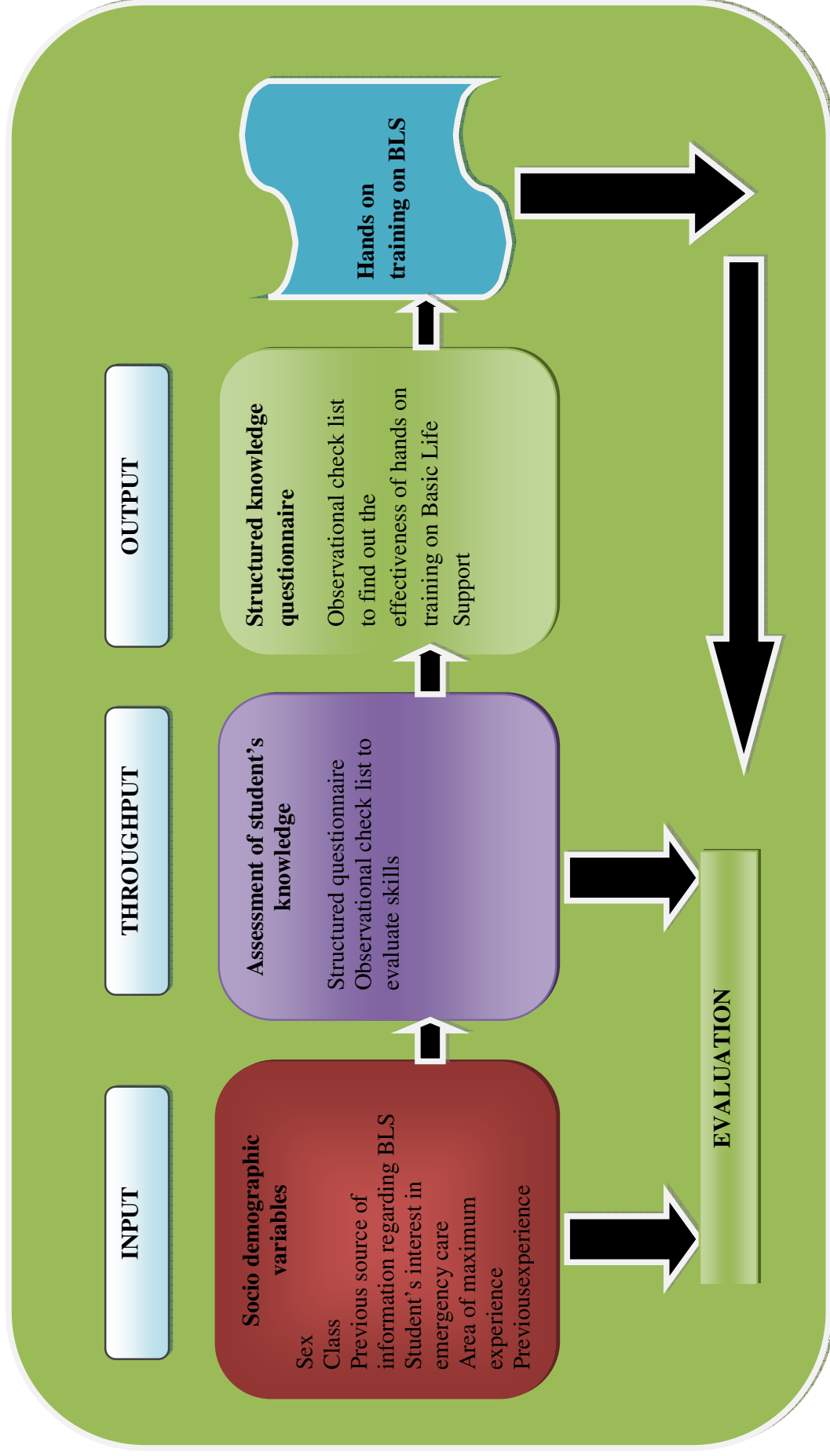


Figure : 1 Modified conceptual frame work on general system theory by ludwing von berlanffy (1968)

## **CHAPTER-II**

### **REVIEW OF LITERATURE**

Review of literature is a key step in research process. It refers to an extensive, exhaustive and systematic examination of publications relevant to the research project. Nursing research may be considered as a continuing process in which knowledge gained from earlier studies is an integral part of research in general.

**Basavanthappa B.T, 1998**

Literature review refers to the activities involved in searching for information on a topic and developing a comprehensive picture of the state as knowledge on that topic.

**Polit and Hungler, 1993**

Therefore the investigator studied and reviewed the related literature to broaden the understandings about the topic and to gain insight into the selected problem under study.

The literature has been reviewed under the following headings

- I. Empirical studies related to the knowledge of nursing students regarding CPR.
- II. Empirical studies related to the knowledge of nursing staffs and health professionals regarding CPR.
- III. Empirical studies related to Effectiveness of teaching programmes regarding CPR.

#### **I. EMPIRICAL STUDIES RELATED TO THE KNOWLEDGE OF NURSING STUDENTS REGARDING CPR**

**Bruce, (2013)** conducted a comparative, descriptive design to collect data from a sample of advanced practice student nurses (n = 71). Participants were assigned into two groups based on the CPR training they had received. Group I had received ALS training (n = 23) and group II had BLS training (n = 48). Students were assessed based on the American Heart Association (AHA, 2005) criteria. Only five students (7.04%) obtained a competency score of 90%. The mean scores for group I and group II were 12.3 (SD = 1.42) and 7.7 (SD = 2.38) respectively. There was a statistically significant difference in performance between the groups with a t-test  $p = 0.00001$  and ANOVA  $P = 0.03$ . The null hypothesis was rejected. The study showed that CPR skill performance and competence are determined by the level of CPR training students received.

**Sanjeeva Rai, (2012)** conducted a descriptive cross sectional study to assess the resuscitation knowledge among interns in 3 medical college hospitals using a questionnaire. The interns were requested to answer the questionnaire, comprising of 20 questions covering varied aspects of basic and advanced life support of child and adult. Statistical analysis was done by frequency, percentage, mean and mean percent. 270 interns were included in the study. On an average 9.05 questions were rightly answered. Highest score of 16 was achieved by 3 and lowest score was achieved by 2. Seven questions were rightly answered by more than 50%. All the participants in the study agreed that structured resuscitation training should be added in the curriculum. The author finds out scattered knowledge about resuscitation, which is not adequate. Introduction of structured resuscitation program in the undergraduate curriculum is essential to acquire knowledge.

**Sathish kumar ( 2012)** conducted a cross sectional study regarding the awareness of Basic Life Support (BLS) among Students, Doctors and Nurses of Medical, Dental, Homeopathy and Nursing Colleges. The results were analyzed using an answer key prepared with the use of the Advanced Cardiac Life Support manual. Out of 1,054 respondents, 345 were medical students, 75 were medical interns, 19 were dental students, 59 were dental interns, 105 were homeopathy interns, 319 were nursing students, 72 were doctors, 29 were dentists, 25 were nursing faculty and six were homeopathy doctors. No one among them had complete knowledge of BLS. Only two out of 1054 (0.19%) had secured 80 – 89% marks, 10 out of 1054 (0.95%) had secured 70 – 79% marks, 40 of 1054 (4.08%) had secured 60 – 69% marks and 105 of 1054 (9.96%) had secured 50 – 59% marks. A majority of 894 (84.82%) had secured less than 50% marks. The author find out that the Awareness of BLS among students, doctors and nurses of medical, dental, homeopathy and nursing colleges is very poor.

**Srinivasa nalini (2012)** conducted a cross-sectional study among medical, dental, and nursing student. A questionnaire was given interrogating them regarding various aspects of awareness and skills involved in BLS. The data was analyzed using software version Statistical Package for Social Sciences (SPSS) 12.0. Demographic data were analyzed using analysis of variance, unpaired t-test and Chi-square tests appropriately. Standard tests of significance were applied to determine the  $P < 0.05$  was considered significant. More than half of the medical students had fair knowledge of the basics in

BLS. Remaining students had a general idea about the skills and techniques used in BLS. Author found that the students considerably lagged behind in the knowledge of cognitive and practical skills of BLS.

**Sharma (2012)** conducted a descriptive study to assess the performance of students on BLS between the age group of 14-19 years. Of these, 44 (44%) were females and 56 (56%) were males. 70% of students performed all CPR steps and 75% performed all AED steps. Students scored better in chest compression (CC) performance, particularly the parameters, achieving adequate release of CC (85%), correct CC depth (83%) and correct hand positioning (66%). 50% of students achieved the correct CC rate according to the set standard (90-110/min). Students tended to perform CC at a faster rate as 90% of students were achieving a rate between 90-120/min. No student was performing CC under 90/min. 50% of students achieved, on average, the correct ventilation volume according to the accepted standard (500 – 800mls). The results of this study show that the students performed quality CC at an acceptable standard.

**Anupam shrivastava (2011)** conducted a retrospective study over an 18-month period. In hospital adult cardiac arrest victims in the pre-BLS/ACLS training period (January 2009 to September 2009) and the post-BLS/ACLS training period (October 2009 to June 2010) were included in the study. Compared the outcomes of CPR between these two study periods there were a total of 627 in-hospital cardiac arrests, 284 during the pre-BLS/ACLS training period and 343 during the post-BLS/ACLS training period. In the pre-BLS/ACLS training period, 52 patients (18.3%) had return of spontaneous circulation, compared with 97 patients (28.3%) in the post-BLS/ACLS training period ( $P < 0.005$ ). Survival to hospital discharge was also significantly higher in the post-BLS/ACLS training period (67 patients, 69.1%) than in the pre-BLS/ACLS training period (12 patients, 23.1%) ( $P < 0.0001$ ). Formal certified BLS and ACLS training of healthcare professionals leads to definitive improvement in the outcome of CPR.

**Rodgers (2010)** conducted the study for 34 senior nursing students from four nursing programs participated in two separate BLS classes, completing both the written and practical evaluations. Immediately following the courses, all participants served as team leader for a video recorded simulated cardiac arrest event. The result of the study was



Spearman's correlation coefficient between the written test scores and practical skills performance was 0.194 (2tailedsignificance = 140.272). The BLS written evaluations was not a predictor of participant skills in managing assimilated cardiac arrest event immediately following a BLS course. Both work in concert to define participant knowledge and neither should be used exclusively to determine participant competence

## **II. EMPIRICAL STUDIES RELATED TO THE KNOWLEDGE OF NURSING STAFFS AND HEALTH PROFESSIONALS REGARDING CPR**

**Srinath kumar (2014)** Conducted a cross sectional study was by assessing responses to 20 selected basic questions regarding BLS among health sectors across colleges and hospitals in Salem and Coimbatore. Questionnaire in BLS were used to assess the levels of awareness to BLS and its practical knowledge. The results were analyzed using answer key prepared from ACLS manual. Out of 1,365 responders including medical, dental and homeopathy interns, nursing students, emergency trauma care technician students, respiratory therapy technician, staffs, M.D. emergency and critical care post-graduation students, MBBS doctors, dentists, nursing faculty, other specialist doctors and physiotherapist. Only 3% secured 90-95% marks, 4% secured 80-89%marks, 9% secured 70 -79% marks, 6% secured 60-69% marks, 14% secured 50 -59% marks, 64% secured less than 50% marks. In this study, author found that most of the undergraduates, paramedicine, nurses, physiotherapists had an average knowledge about BLS. Knowledge to newer updates were lacking among them. Only Emergency room Health sectors had adequate knowledge on BLS.

**Valarmathi selvaraj (2013)** conducted a questionnaire-based, cross sectional study at the College of Medical Sciences-Teaching Hospital, among the nurses who were working in the hospital during October, 2010. Among the total 175 nurses, 70 of them responded with a response rate of 40%. The mean  $\pm$  SD age of the respondents was  $22.07 \pm 2.30$  years and their mean  $\pm$  SD duration of experience was  $11.45 \pm 2.67$  months. The worksites of the respondents varied and there were more than 15 different sites. A relatively high number ( $n = 8$ ; 11.43%) of the respondents were from the Department of Medicine. The mean $\pm$  SD of the overall total knowledge scores was  $11.45 \pm 2.67$  (the maximum possible score was 21). There was no significant association between the total scores and age ( $p = 0.823$ ) and the duration of experience ( $p = 0.239$ ). However, there

was an association between the worksites and the total scores ( $p = 0.013$ ). The knowledge of the nurses was found to be low, thus suggesting a need for educational interventions.

**Nagarajan (2013)** conducted a survey on knowledge and experience in cardiopulmonary resuscitation (CPR) and on knowledge of the Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care (ECC). Three hundred and four nurses at Asahikawa Medical College Hospital were asked to fill the questionnaires. The results show that more than 80% of the nurses are much interested in CPR. Most of the nurses had received education and training in CPR as students or after graduation. However, cases of cardiopulmonary arrest and CPR were experienced by only about 40% of the nurses. Most of the nurses had never heard of the Guidelines for CPR and Emergency cardiovascular care. The researchers concluded that there is a need to provide more education (on CPR) to nursing staff.

**Stephen (2013)** conducted a cross sectional survey in all registered nurses working in 21 primary health care centers. A self-administered questionnaire was distributed to all registered nurses. It included personal characteristic training and practice of resuscitation, perceived competence regarding practical skills. Factors that could affect nurse's knowledge were studied out of 279 questionnaires 165 were returned back with 59.1% response rate. The majority of them 86.1% attended cardiopulmonary resuscitation as a part of the nursing school curriculum and 65.5% of the nurses had participated in a cardiopulmonary resuscitation learning session other than curriculum. It was found that 26.7% of the nurses had never participated in real resuscitation attempt. Over all the median knowledge score of the registered nurses were 42.9% for cardiopulmonary resuscitation and 52.0% for ECG. Factors that affected nurses knowledge score were years of experience other than in curriculum attempting real resuscitation and self-confidence of the nurses.

**Sugandhid'Souza (2012)** conducted a survey on knowledge and attitude towards cardiopulmonary resuscitation and provision of cardiopulmonary resuscitation education to nurses in general wards. The survey was done on 280 nurses from the four university hospital with 700beds. The mean score for knowledge of basic life support was 12.71 about 76% of the nurses believed that they had a responsibility to perform cardiopulmonary resuscitation, but 53.3% of the nurses were not confident to perform

cardiopulmonary resuscitation. About 94% of the nurses had received education on cardiopulmonary resuscitation but 32.3% of those took it 6-12 years ago. About 41% of the nurses spent 3-4 hours for the education and 73.2% of those took simulation education. Most of the nurses had received cardiopulmonary resuscitation education, which were not knowledgeable or confident. Therefore better cardiopulmonary resuscitation education programme including updated knowledge are needed.

**Stephen (2012)** conducted a questionnaire-based, cross sectional study at the College of Medical Sciences-Teaching Hospital, among the nurses who were working in the hospital. A self-developed questionnaire containing 21 questions was distributed to the nurses and filled by the nurse and analyzed as per the study objectives. Among the total 175 nurses, 70 of them responded with a response rate of 40%. The worksites of the respondents varied and there were more than 15 different sites. A relatively high number ( $n = 8$ ; 11.43%) of the respondents were from the Department of Medicine. The mean  $\pm$  SD of the overall total knowledge scores was  $11.45 \pm 2.67$  (the maximum possible score was 21) In general, the knowledge of the nurses was found to be low, thus suggesting a need for educational interventions.

**Sharma (2010)** conducted a observational study was by assessing response to self prepared questionnaire consisting of the demographic information of the medical, paramedical staff, their personnel experience, attitude and knowledge of After excluding incomplete questionnaires, the data from 121 responders 27 clinical faculty members, 21 dental and basic sciences faculty members, 29 house officers and 44 nurses and health assistant were analyzed. Only 9 (7.4%) of the 121 responders answered  $\geq 11$ , 53 (43%) answered 7-10, and 58 (48%) answered. The average health personnel in their hospital lack of adequate knowledge in CPR, BLS. Training and experience can enhance knowledge of CPR of these personnel. Thus standard of CPR, BLS training and assessment are recommended to their hospital.

### III. EMPIRICAL STUDIES RELATED TO EFFECTIVENESS OF TEACHING PROGRAMMES REGARDING CPR

**Kabina Ratha (2014)** conducted a structured knowledge questionnaire was prepared for the assessment of knowledge. Pretest was done on 1<sup>st</sup> day and planned teaching program was given on same day. On day 7<sup>th</sup> post test was done with same questionnaire. Posttest knowledge score was more than pretest knowledge score. Pretest Mean-9.12, Median-9 SD-1.97 and Posttest Mean – 13.4, Median-13 SD-2.89.”t”value was 13.9 which is greater than the tabulated value at (p=0.001) level of significance and which highly significant. There is no significant association between the knowledge of student with age, gender and previous knowledge regarding Basic life support, as the Chi square value 0.46, 0.94 and 0.05 which is less than the tabulated value. There is significant association between the knowledge of students with the education qualification as the Chi square value is 1.04 which is more than the tabulated value at (p=0.001)

**Ravinder (2014)** conducted a one group pre-test post-test pre experimental approach was adopted to evaluate the 'effectiveness of planned teaching programme on cardiopulmonary resuscitation (CPR) technique. The sample of the study comprised of 30 students studying in BSC nursing in a selected college. A structured closed ended questionnaire was prepared to assess the knowledge level and an observation checklist to evaluate the skill concerning CPR technique of the degree students to evaluate the effectiveness of PTP. Reliability ( $r = 0.88$ ) of the tool was tested by split half technique and Karl Pearson Co-efficient correlation formula. The data collected from the respondents and analyzed by using descriptive and inferential statistics. The difference between pre-test and post-test knowledge scores of nursing students on CPR technique was found to be very highly significant. The PTP was found to be an effective strategy in increasing the knowledge of nursing students regarding CPR technique.

**Asmita Chaudhary (2014)** conducted a workshop on basic skill of Cardio-Pulmonary Resuscitation (CPR) among doctors and nursing staff in medical college. Theoretical aspect was explained through power point presentation where as practical aspect was demonstrated through skill station. The results were analyzed by using an answer key prepared from BLS manual of American Heart Association (AHA). Out of 117

participants only three participants secured 80-90% marks in pretest whereas rest of secured less than 50% marks .Post workshop assessment was done with same question papers showed 70% candidates securing more than 80%. Hence BLS workshop is essential to improve knowledge and skill of CPR.

**Febelao Prakash (2013)** conducted a quasi-experimental study to assess the effectiveness of planned teaching program on knowledge and practice of Basic Life Support among high school students in Mangalore. The sample consisted of 40 rural high school students. The study showed that majority (87.5%) of the students had inadequate knowledge .The planned teaching program facilitated them to update their knowledge and practice related to Basic Life Support. Hence, the planned teaching program is an effective teaching strategy to improve knowledge and practice of sample on BLS.

### **SUMMARY**

This chapter has dealt with the review of literature under various headings. This literature review has provided an understanding and broadened the investigators outlook necessary for the research study.

## **CHAPTER-III**

### **RESEARCH METHODOLOGY**

Research methodology involves the systematic procedures by which the researcher starts from the initial identification of the problem to its final conclusion. It involves steps, procedures and strategies for gathering and analysing data in a research investigation.

**Denise F. Polit (2011)**

This chapter deals with the research methodology adopted for the proposed study and the different steps undertaken after gathering and organizing data for investigation. It includes Research approach, Research design, Variables, Settings, Population, Sample, Sample size, and Criteria for sample selection, Sampling technique, Development of the tool, Description of tool, validity, Reliability, Pilot study, Data collection procedure, Plan for data analysis and Ethical consideration.

#### **RESEARCH APPROACH**

A research approach tells the researcher what data to collect and how to analyze it. It also suggests possible conclusion to be drawn from the data, in view of the nature of the problem under study and to accomplish the objectives of the study.

**Denise F. Polit (2011)**

Quantitative research approach was used as an appropriate research approach for the present study to evaluate the effectiveness of hands on training on knowledge and skills regarding Basic Life Support among final year B.Sc. Nursing students in Annammal College of Nursing, Kuzhithurai at Kanyakumari District.

#### **RESEARCH DESIGN**

Research design provides the glue that holds the research project together. A design is used to structure the research to show how all the major parts of the research project works together to try to address the initial research question.

**Denise F. Polit (2011)**

The pre experimental one group pretest and post design was chosen for this study to evaluate the effectiveness of hands on training on knowledge and skills regarding Basic Life Support among final year B.Sc. Nursing students in Annammal College of Nursing, Kuzhithurai at Kanyakumari District.

## SCHEMATIC REPRESENTATION OF RESEARCH DESIGN

PRE TEST	INTERVENTION	POST TEST
O <sub>1</sub>	X	O <sub>2</sub>

### KEYS

O<sub>1</sub> - Pretest assessment of knowledge and skills regarding CPR.

X . Demonstration on CPR.

O<sub>2</sub> . Pos test assessment of knowledge and skills regarding CPR.

### VARIABLES

Variables are defined as “an attribute that varies, that is takes on different values”.

**Denise F. Polit (2011)**

### INDEPENDENT VARIABLE

Independent variable is defined as “the variable that is believed to cause or influences the dependent variable”.

**Denise F. Polit (2011)**

In this study, the independent variable is Hands on Training on Basic Life Support.

### DEPENDENT VARIABLE

Dependent variable is defined as “the variable hypothesized to depend on or be caused by another variable of interest”.

**Denise F. Polit (2011)**

In this study, the dependent variables are knowledge and skills on Basic Life Support.

### RESEARCH SETTINGS

Settings refer to the area where the study is conducted.

**Denise F. Polit (2011)**

The setting was chosen on the basis of availability of samples and the study was conducted at Annammal College of Nursing, Kuzhithurai at Kanyakumari District.

## **POPULATION**

A Population is defined as “the entire set of individuals or objects having some common characteristics”.

**Denise F. Polit (2011)**

## **TARGET POPULATION**

Target population is defined as “the entire population in which a researcher is interested and to which he or she would like to generalize the study results”.

**Denise F. Polit (2011)**

The population under study constituted all the final year B.sc. Nursing students at Kanyakumari District.

## **ACCESSIBLE POPULATION**

Accessible population is defined as “The population of people available for a particular study often, a non-random subset of the target population”.

**Denise F. Polit (2011)**

In this study, the accessible population comprises the final year B.Sc. Nursing students in Annammal College of Nursing.

## **SAMPLE**

Sample is defined as, “a subset of a population comprising those selected to participate in a study”.

**Denise F. Polit (2011)**

Students who are studying final year B.Sc. Nursing in Annammal College of Nursing, who fulfilled the inclusion criteria.

## **CRITERIA FOR SAMPLE SELECTION**

Sampling criteria involves selecting cases that meet some predetermined criterion of importance. The criteria for sample selection are mainly depicted under two headings, which includes the inclusion criteria and exclusion criteria.

## **INCLUSION CRITERIA**

This study includes the

- students who are studying in final year B.Sc. Nursing
- students of both genders.
- students who are willing to participate.



## **EXCLUSION CRITERIA**

This study excludes the

- students who are not cooperative.
- students who are not available at the time of data collection

## **SAMPLE SIZE**

Sample size is defined as, “the number of people who participate in a study”.

**Denise F. Polit (2011)**

Sample size was 60. They are the students who are studying final year B.Sc. Nursing students in Annammal College of Nursing who fulfilled the inclusion criteria.

## **SAMPLING TECHNIQUE**

Sampling technique is defined as, “The process of selecting a portion of the population to represent to the entire population”.

**Suresh K Sharma (2007)**

The investigator used non probability convenient sampling technique to draw 60 samples from the study population. Initial screening was undertaken to the study participants who fulfilled the inclusion criteria. Finally a list of 60 students has been selected as sample.

## **DEVELOPMENT OF THE TOOL**

Tool development is a complex and time consuming process. It consists of defining the construct to be measured, formulating the items, assessing the items for content validity, developing instructions for respondents, pre-testing, estimating the reliability and conducting the pilot-study.

**Polit and Hungler,( 1993).**

The tool was prepared on the basis of objectives of the study. The following methods were used for the development of the tool by the investigator.

- Review of literature from books, journals, other publications and web-sites.
- Informal interview with the students.
- Discussion with subject experts.

## **DESCRIPTION OF THE TOOL**

The tool used in this study has three parts

### **PART I**

#### **SOCIO DEMOGRAPHIC VARIABLES**

It deals with socio demographic data. An interview schedule was used to collect the demographic variables includes age, sex, religion, previous information regarding basic life support.

### **PART II**

#### **KNOWLEDGE QUESTIONNAIRE**

A structured interview schedule is used to assess the pretest and post test knowledge of students on Basic Life Support.

### **PART III**

#### **OBSERVATIONAL CHECK LIST**

Observational Check List to assess the pretest and post test skills among final year B.Sc. Nursing students regarding Basic Life Support.

#### **SCORING PROCEDURES**

The knowledge questionnaire consists of 25 items. Each item carries 1 mark and for adequate knowledge 76% to 100% was awarded, moderate knowledge 51% to 75% and for inadequate knowledge less than 50% was awarded.

#### **SCORING FOR KNOWLEDGE QUESTIONNAIRE**

SCORE 1 - Correct answer

SCORE 0 - Wrong answer

#### **SCORING INTERPRETATION**

<b>Score</b>	<b>Interpretation</b>
76-100	Adequate knowledge
51-75	Moderately adequate knowledge
31-50	Inadequate knowledge

## **CONTENT VALIDITY OF THE TOOL**

Content validity is defined as, “the extent to which an instrument accurately reflects the abstract construct (or concept) being examine.

**Suresh K Sharma, (2007)**

To ensure the content validity, the prepared data collection tool along with the problem statement, objectives, operational definitions, hypotheses, and questionnaire designed for validation were submitted to eight experts in different specialty including one Cardiologists, six Medical Surgical Nurses and Bio- Statisticians. The experts were requested to judge the items for relevance, appropriateness and degree of agreement for the study. All the experts gave their consensus and the tool was finalized.

## **RELIABILITY OF THE TOOL**

Reliability is defined as, “The degree of consistency or dependability with which an instrument measures an attribute”.

**Denise F. Polit (2011)**

Reliability of the tool was established using knowledge questionnaire and the reliability score is  $r = 0.9$ . The score indicates that the tool is consistent. Hence it was considered reliable for proceeding with the study.

## **PILOT STUDY**

Pilot study is defined as, “a small-scale version or trial run, done in preparation of a major study”.

**Denise F. Polit (2011)**

Pilot study was conducted in Annammal College of Nursing, Kuzhithurai in the month of November for a period of 1 week. Permission was sought from the director for conducting the pilot study. Reliability of the tool was established using Inter rater reliability and the reliability score was  $r = 0.9$ . The investigator selected 6 samples using non probability convenience sampling based on inclusion criteria. The interview was conducted with the help of questionnaire. Findings of the pilot study also revealed that it was feasible and practicable to conduct the study at the selected college and the criterion measures were found to be effective.

## **METHODS OF DATA COLLECTION**

The data collection procedure was done for a period of 4 weeks during the month of January in Annammal college of Nursing, Kuzhithurai after receiving initial permission from the institution and formal permission from the Principal of the College. The investigator selected the students from final year B.Sc. Nursing and prepared the list of all the students and the list consists of 60 students and from that, the investigator selected the samples according to the Non probability convenience sampling technique.

At first, a rapport was established with the students and the purpose of the study was explained to them. It was assured to them that all data would be kept strictly confidential and used only for study purpose. After obtaining the verbal and written consent of the students to participate in the study, socio demographic data was collected by the investigator and knowledge questionnaire was also collected from the study participant.

The investigator knows with the help of knowledge questionnaire to find out the knowledge of the final year B.Sc. Nursing students. Scoring was given appropriately.

## **PLAN FOR DATA ANALYSIS**

Data analysis is the systematic organization, synthesis of research data and testing of hypothesis by using the obtained data.

**Polit and Beck (2010)**

The data related to assessment of factors will be analyzed in terms of descriptive statistics (mean, standard deviation) and inferential statistics (Chi- square distribution) will be to find out the knowledge of the students.

## **DESCRIPTIVE STATISTICS**

- Frequency and percentage distribution will be used to assess the socio demographic variables of final year B.Sc. Nursing students.
- Frequency and percentage distribution will be used to assess the knowledge and skills.
- Mean and standard deviation will be used to assess the effectiveness of Hands on Training.

## **INFERENTIAL STATISTICS**

- Un paired 't' test will be used to compare the posttest level of Knowledge and skills.
- Paired 't' test will be used to evaluate the effectiveness of Hand on Training.

- Chi – square test will be used to find out the association between the posttest level of knowledge and skills regarding Basic Life Support with the selected socio demographic variables.

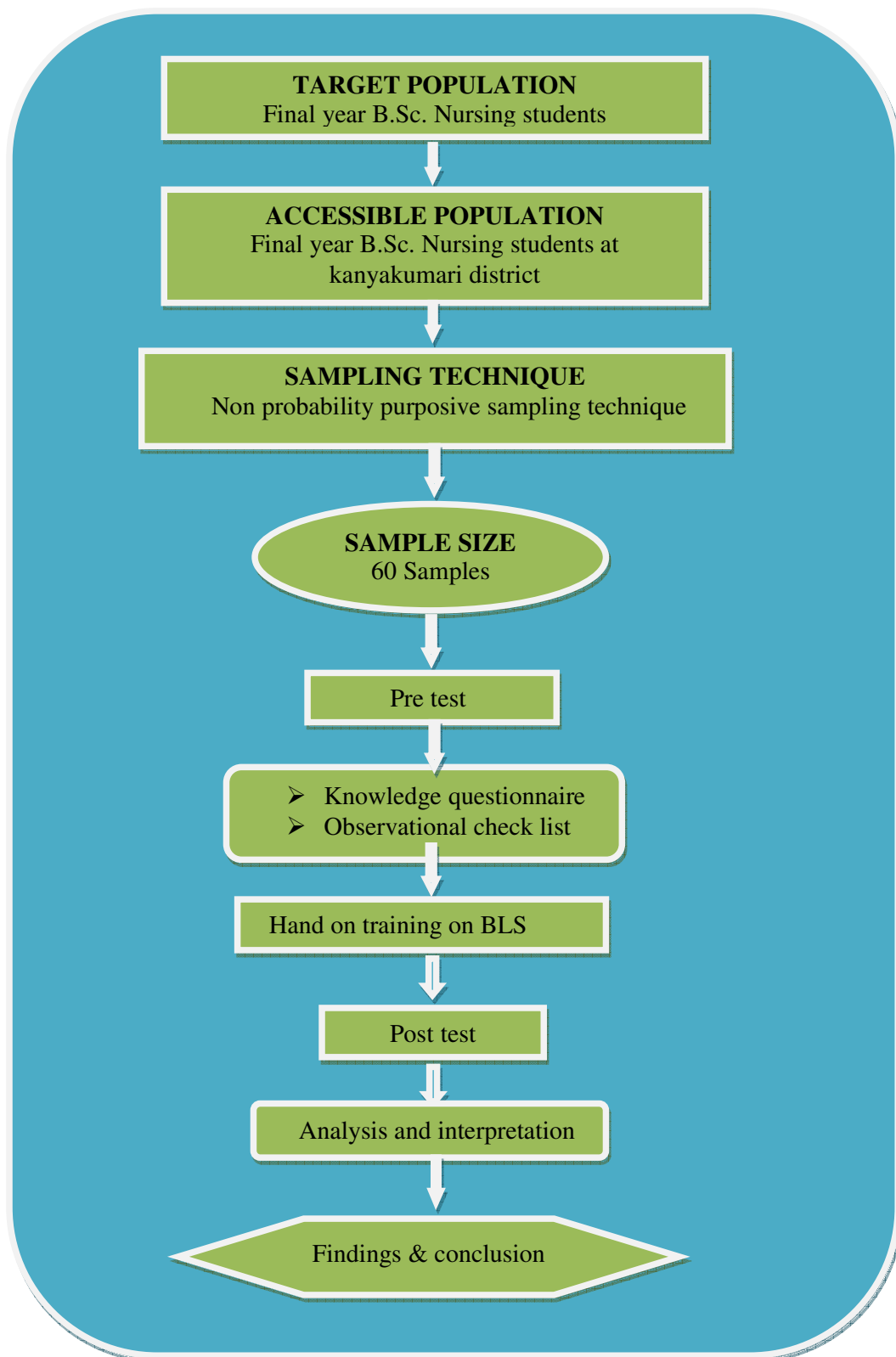
### **ETHICAL CONSIDERATIONS**

For this study, the investigator looks into consideration of the ethical issues. No ethical issues raised by conducting the study.

- Formal permission was obtained from the institutional review board and ethical committee of Annammal College of Nursing, Kuzhithurai, Kanyakumari District.
- Official Permission was obtained from the Principal of Annammal College of Nursing, Kuzhithurai.
- Written informed consent was obtained from the study participants.
- The subjects were informed that the confidentiality of the data would be maintained.

### **SUMMARY**

This chapter dealt with the selection of research approach, research design, setting, population, and sample, sampling technique, sampling criteria, development of study instruments, validity, and reliability of study instrument, pilot study, data collection procedure and plan for data analysis. The following chapter deals with analysis and interpretation of data using descriptive and inferential statistics.



**Figure: 2 SCHEMATIC REPRESENTATION OF RESEARCH DESIGN**

## **CHAPTER IV**

### **DATA ANALYSIS AND INTERPRETATION**

Data analysis is defined as the method of organizing data in such a way that the research questions can be answered. Interpretation is the process of the results and of examining the simplification of the findings with in a broader context.

**Polit and Beck, (2004)**

Statistics is a field of study concerned with techniques or methods of collection of data, classification, summarizing, interpretation, drawing inferences, testing of hypotheses, making recommendation, etc.

**Mahajan, (2004)**

#### **OBJECTIVES OF THE STUDY**

- To assess the pretest and posttest level of knowledge and skills regarding Basic Life Support among final year B.Sc. Nursing students
- To evaluate the effectiveness by comparing the pretest and posttest level of knowledge and skills among final year B.Sc. Nursing students
- To find out the association between the posttests level of knowledge and skills with selected socio demographic variables among final year B.Sc. Nursing students.

#### **ORGANIZATION OF THE FINDINGS**

The data collected were edited, tabulated, analyzed, interpreted and findings obtained were presented in the form of tables and diagrams represented under the following sections.

##### **SECTION I**

- ❖ Data pertaining to frequency & percentage distribution of socio demographic variables among final year B.Sc. Nursing students.

##### **SECTION II**

- ❖ Data pertaining to frequency & percentage distribution of pre and posttest level of knowledge regarding BLS among final year B.Sc. Nursing students.

##### **SECTION III**

- ❖ Data pertaining to frequency and percentage distribution of pretest and posttest level of skills regarding BLS among final year B.Sc. Nursing students.

#### **SECTION IV**

- ❖ Data pertaining to the effectiveness of hands on training on knowledge and skills regarding BLS among final year B.Sc. Nursing students.

#### **SECTION V**

- ❖ Data pertaining to association between posttest level of knowledge and selected socio demographic variables among final year B.Sc. Nursing students.

#### **SECTION VI**

- ❖ Data pertaining to association between posttest level of skills and selected socio demographic variables among final year B.Sc. Nursing students.



## SECTION I

**TABLE I: Data pertaining to frequency and percentage distribution of socio demographic variables among final year B.Sc. Nursing students**

S.No	Selected socio demographic variables	Frequency (f)	Percentage %	$\chi^2$	P
1	<b>Sex</b> a) Male b) Female	15 45	25 75	15	1df 0.0001 ***
2	<b>Previous source of information regarding BLS</b> a) Class room b) Internet c) Journal	41 7 12	68.33 11.7 20	33.7	2df 0.000000005 ***
3	<b>Class room performance</b> a) Above average (>80%) b) Average (50-80%) c) Below average (<50%)	13 41 6	21.67 68.33 10	34.3	2df 0.000000004 ***
4	<b>Student's interest in emergency care</b> a) No interest b) Moderate interest c) High interest	25 14 21	41.67 23.33 35	3.1	2df 0.212
5	<b>Area of maximum experience</b> a) General ward b) Emergency ward c) OPD	25 8 27	41.67 13.33 45	10.9	2df 0.0042 **
6	<b>Previous experience on BLS</b> a) Not witnessed b) Witnessed c) Performed	18 23 19	30 38.33 31.67	0.7	2df 0.704

\*\*\*p<0.001, \*\*p<0.01

**Table 1:** It represent the frequency and percentage distribution of final year B.Sc. Nursing students with selected socio demographic variables such as Sex, Previous source of information regarding BLS, Class room performance, Student's interest in emergency care, Area of maximum experience and Previous experience on BLS.

With regard to sex, majority of 45(75%) were females and least of 15(25%) were males.

Regarding to previous source of information about BLS, majority of 41(68.33%) were acquired from class room, 12(20%) through journal and 7(11.7%) through internet.

With regard to class room performance, majority of 41(68.33%) were average (50-80%), 13 (21.67%) were above average (>80%), 6 (10%) were below average.

With regard to student's interest in emergency care majority of 25(41.67%) were not interested, 21 (35%) were high interest in emergency care, 14 (23.33%) were moderate interest.

With regard to area of maximum experience, majority of 27(45%) were OPD, 25 (41.67%) were general ward and least 8 (13.33%) were emergency ward.

With regard to previous experience on BLS majority 23 (38.33%) were witnessed, 19 (31.67%) were performed and 18 (30%) are not witnessed.

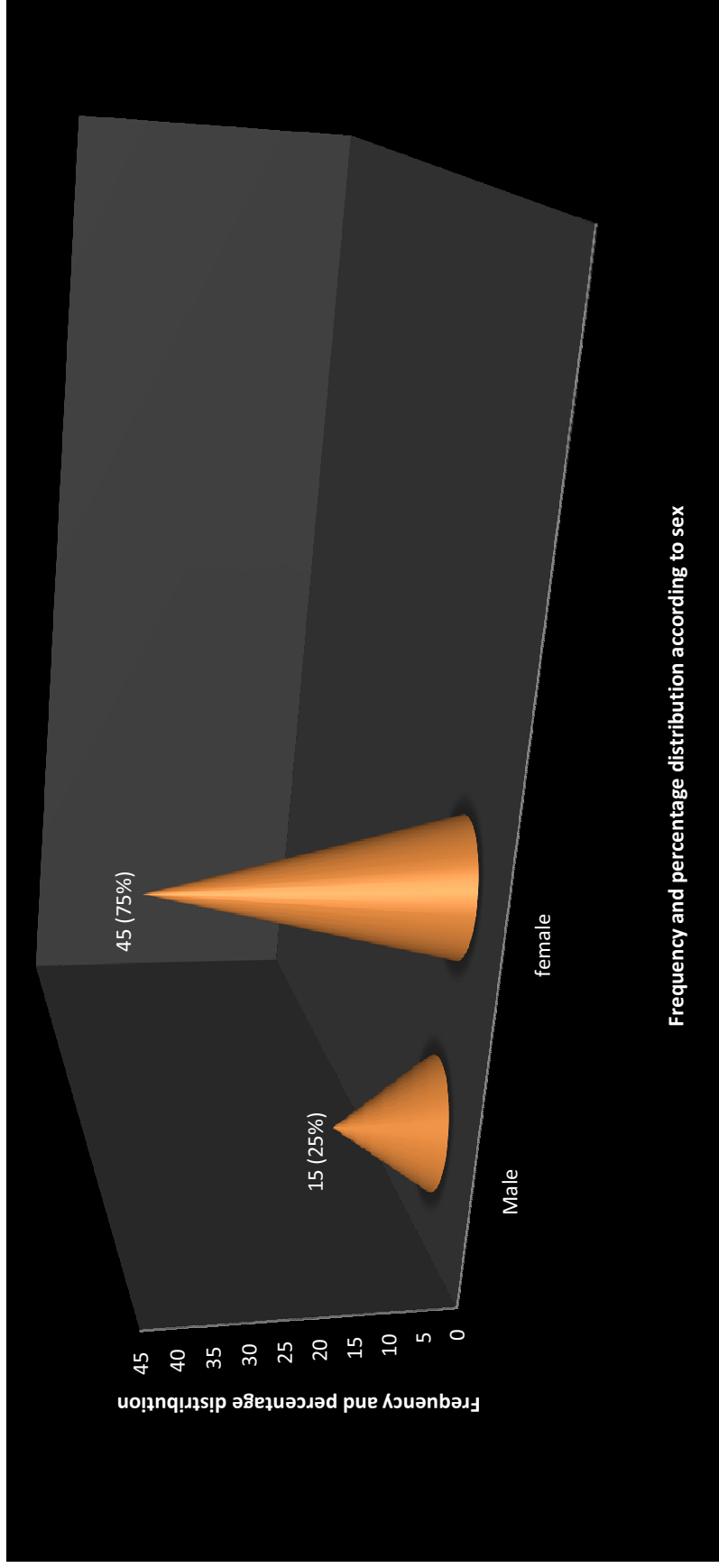


FIGURE 3 FREQUENCY AND PERCENTAGE DISTRIBUTION OF FINAL YEAR B.Sc. NURSING STUDENTS ACCORDING TO SEX

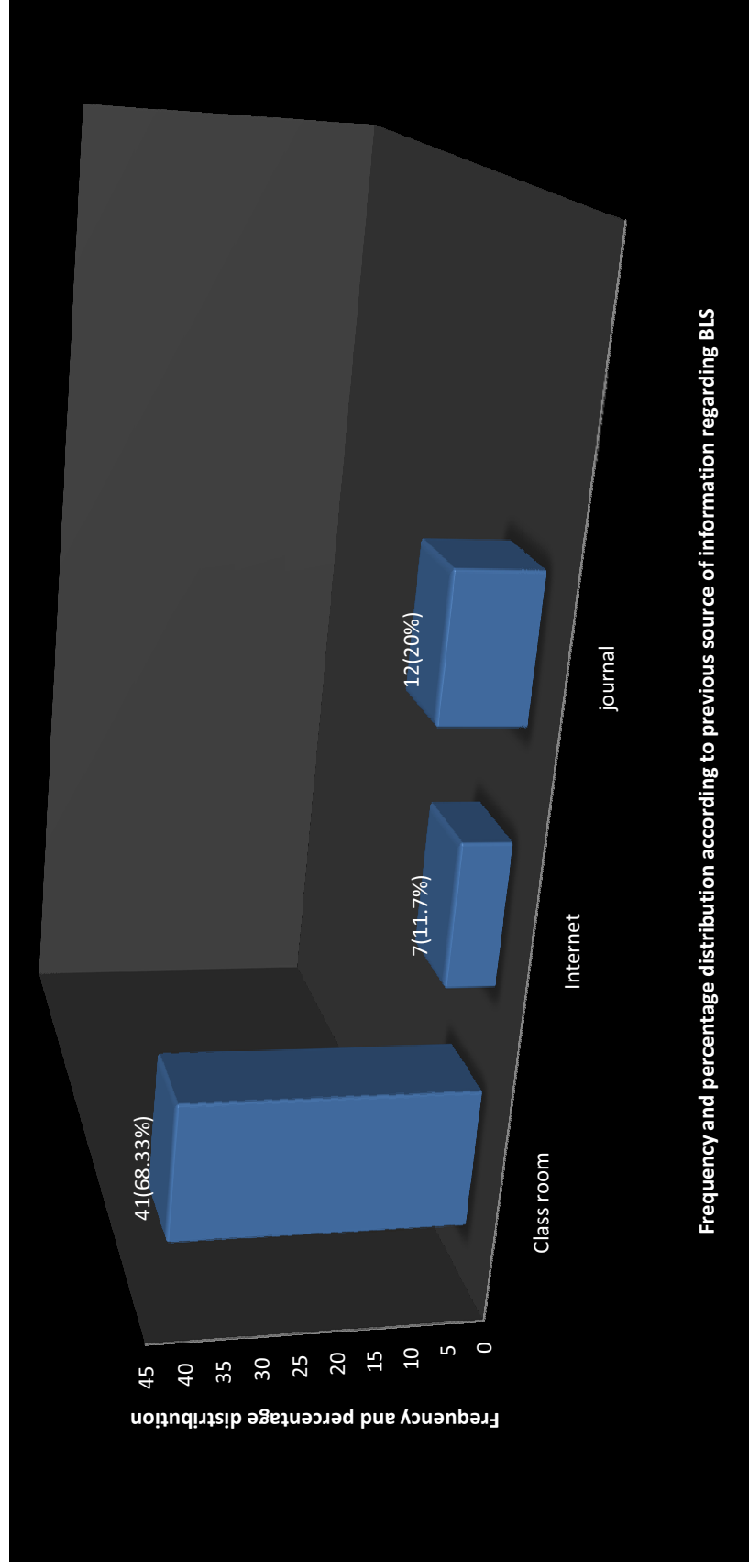


FIGURE 4: FREQUENCY AND PERCENTAGE DISTRIBUTION OF FINAL YEAR B.Sc. NURSING STUDENTS ACCORDING TO PERVIOUS SOURCE OF INFORMATION REGARDING BLS.

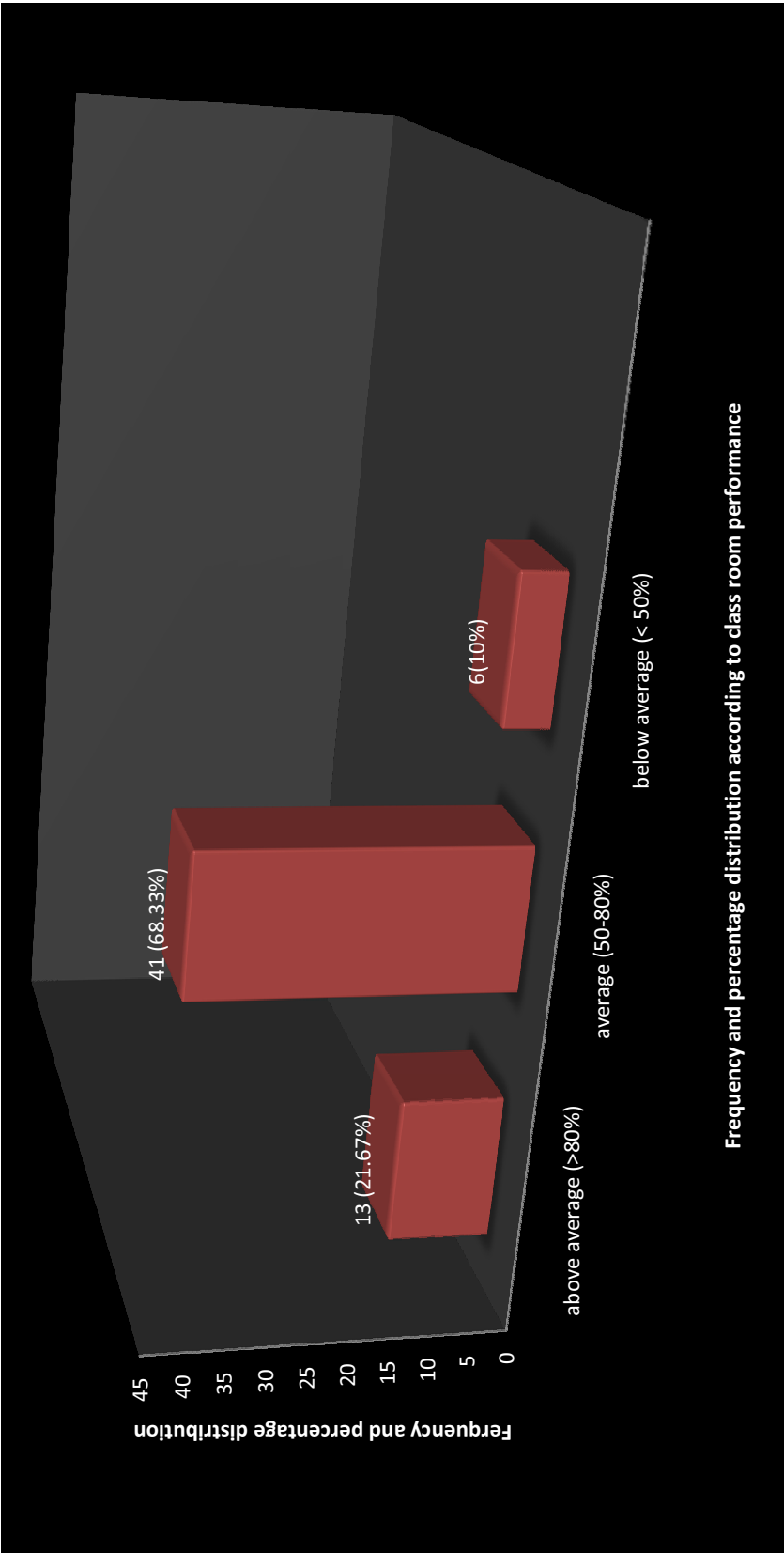


FIGURE: 5 FREQUENCY AND PERCENTAGE DISTRIBUTION OF FINAL YEAR B.Sc. NURSING STUDENTS ACCORDING TO CLASS ROOM PERFORMANCE

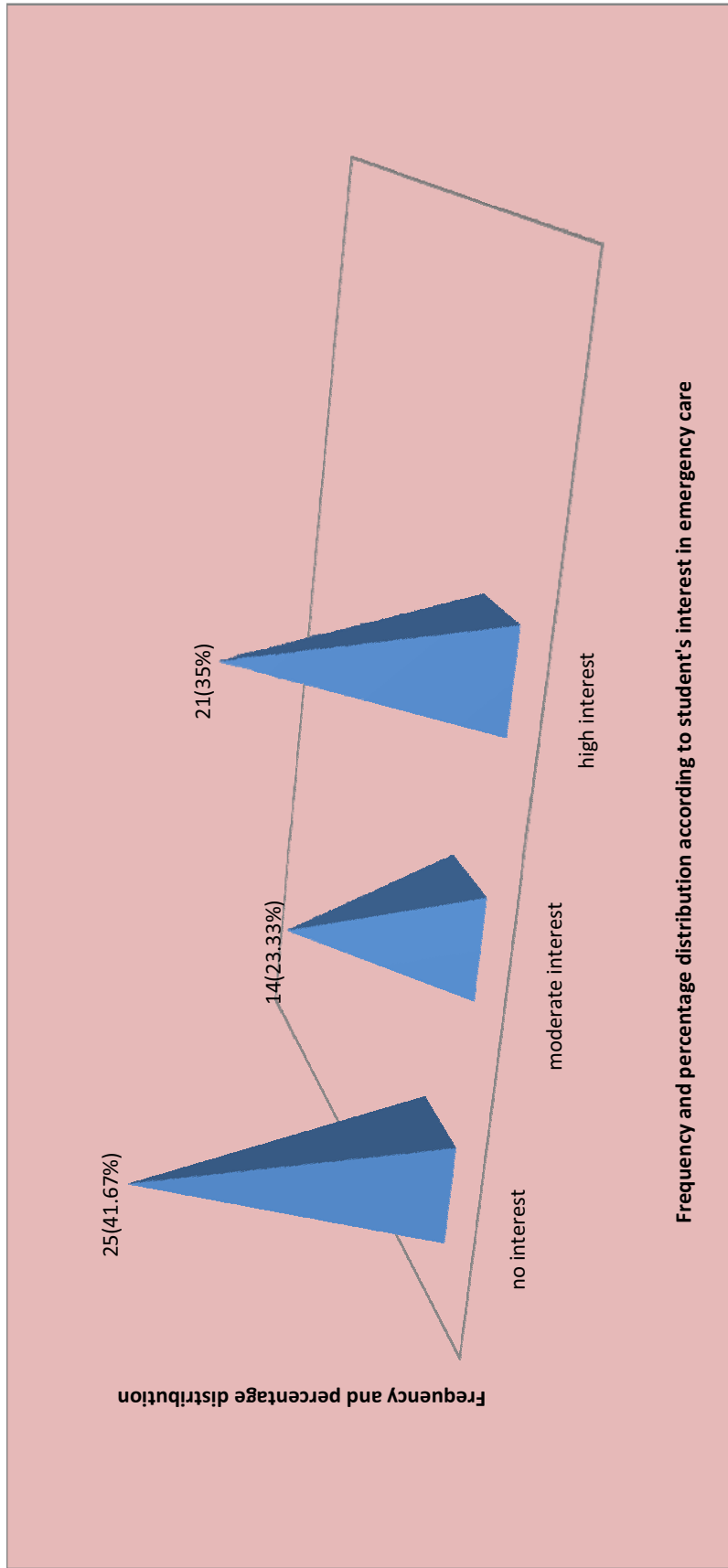


FIGURE: 6 FREQUENCIES AND PERCENTAGE DISTRIBUTION OF FINAL YEAR B.Sc. NURSING STUDENT'S ACCORDING TO STUDENTS INTEREST IN EMERGENCY CARE

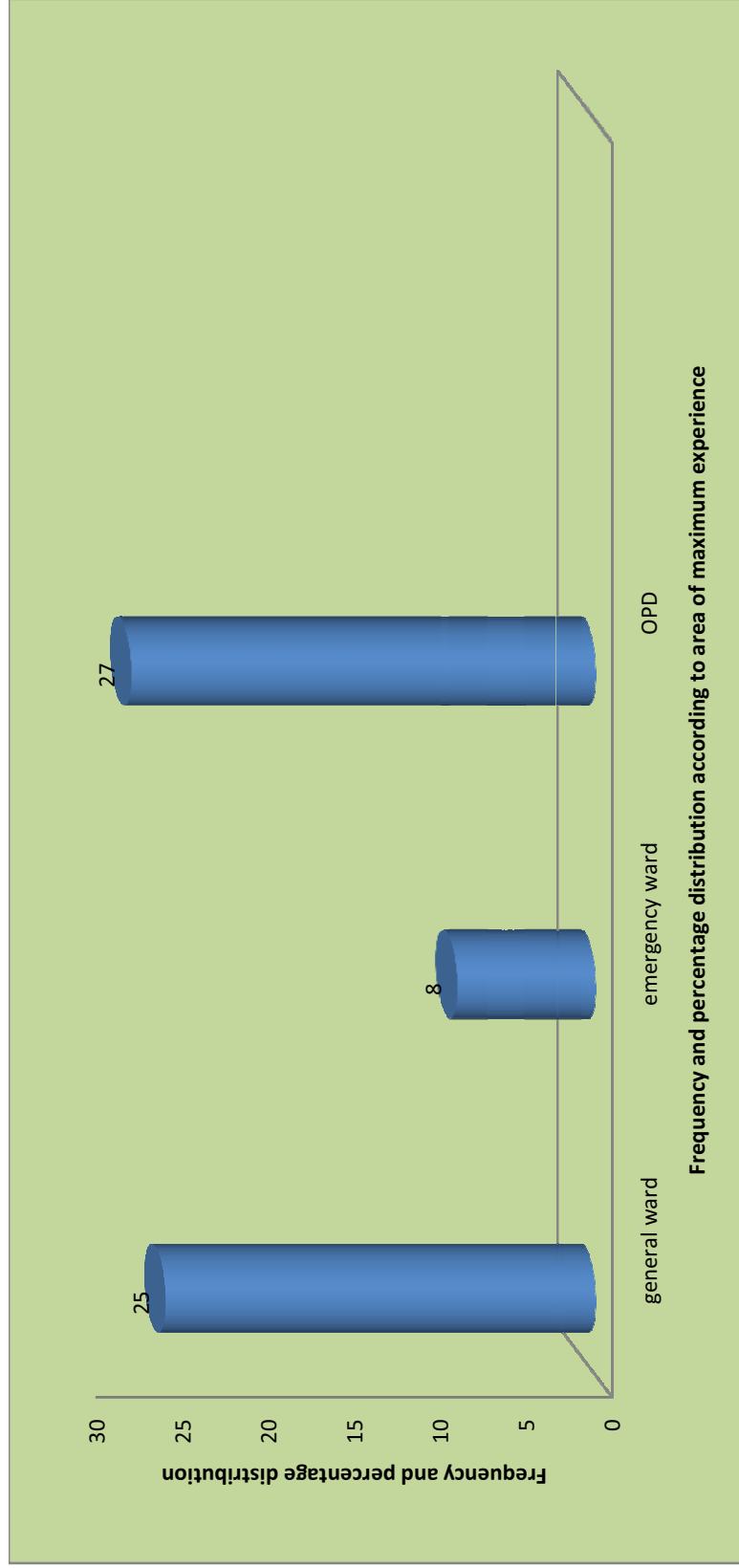


FIGURE: 7 FREQUENCY AND PERCENTAGE DISTRIBUTION OF FINAL YEAR B.Sc. NURSING STUDENT'S ACCORDING TO AREA OF MAXIMUM EXPERIENCE

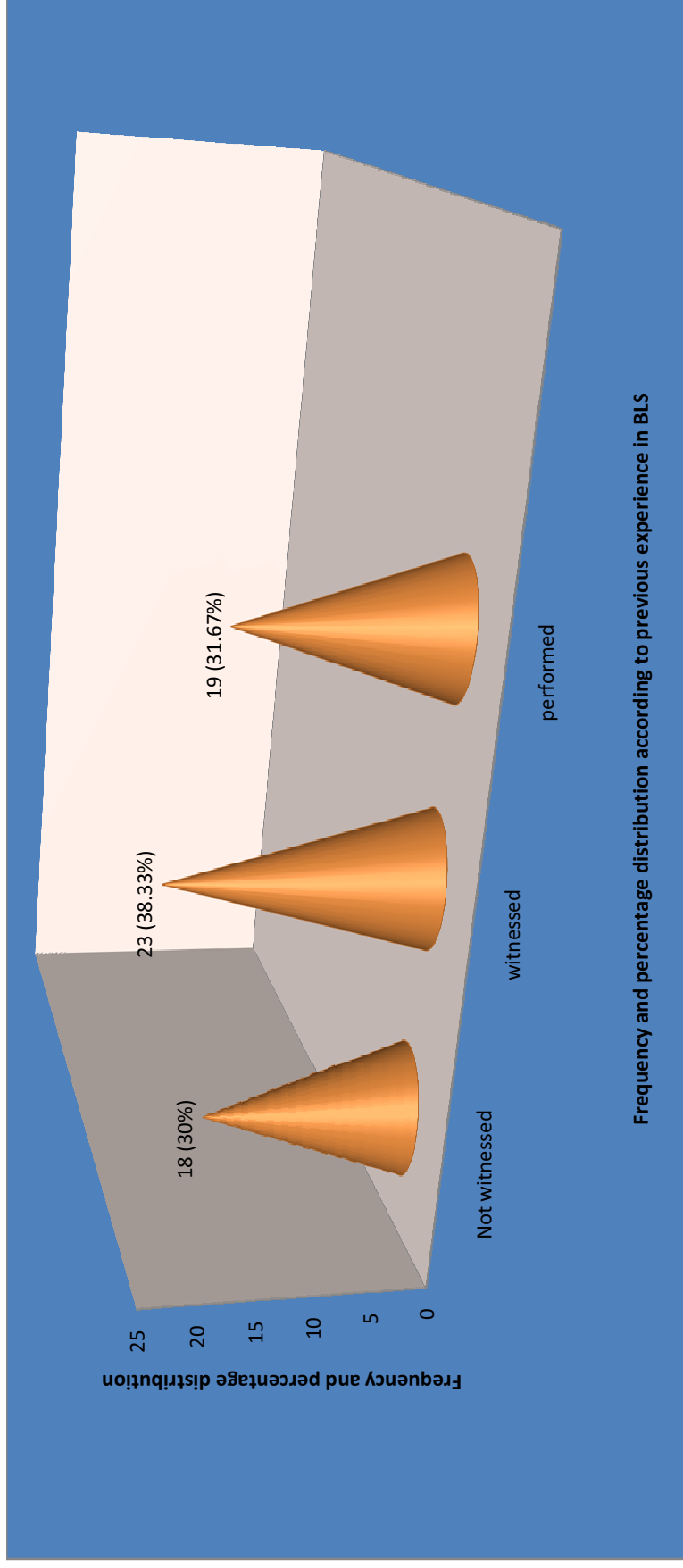


FIGURE: 8 FREQUENCY AND PERCENTAGE DISTRIBUTION OF FINAL YEAR B.Sc. NURSING STUDENTS ACCORDING TO PREVIOUS EXPERIENCE IN BLS



## SECTION II

**TABLE: 2** Data pertaining to frequency and percentage distribution of pretest and post test level of knowledge regarding BLS among the final year B.Sc. Nursing students.

### Testing of hypothesis

**H1:** There is a significant difference between pretest and posttest level of knowledge regarding Basic life support

Level of knowledge	Pre test		Post test	
	f	%	f	%
Adequate	8	13.33	42	70.00
Moderately adequate	27	45.00	18	30.00
Inadequate	25	41.67	0	0.00
Total	60	100	60	100

**Table: 2** Shows the frequency and percentage distribution of pretest and posttest level of knowledge regarding BLS among final year B.Sc. Nursing Students.

With regard to pretest majority of the sample subject 27(45%) had moderate knowledge, whereas 25(41.67%) had inadequate knowledge and 8(13.33%) student's had adequate knowledge. During the posttest 42(70%) were had adequate knowledge, 18(30%) were had moderate knowledge and no one had inadequate knowledge.

### SECTION III

**Table: 3 Data pertaining to frequency and percentage distribution of pretest and posttest level of skill regarding BLS among final year B.Sc. Nursing students.**

#### Testing of hypothesis

H1: There is a significant difference between pretest and posttest level of skill regarding Basic life support

Level of skill	Pre test		Post test	
	F	%	f	%
Adequate	9	15.00	41	68.33
Moderate adequate	24	40.00	19	31.67
Inadequate skill	27	45.00	0	0.00
Total	60	100	60	100

**Table:3** Shows the frequency and percentage distribution of pre test and post test level of skill regarding BLS among final year B.Sc. Nursing students

With regard to pre test majority of the sample subject 27(45%) had inadequate skill, were 24(40%) had moderate skill and 9(15%) student's had adequate skill. During the post test 41(68.33%) were had adequate skill, 19(31.67%) were had moderate skill and no one had inadequate skill.

#### SECTION IV

**TABLE:4 Data pertaining to effectiveness of hands on training on knowledge and skill regarding BLS among final year B.Sc. Nursing students**

Variables	Pretest		Post test		Mean difference	Paired t test	P Value
	Mean	SD	Mean	SD			
Knowledge	12.73	1.81	21.68	1.72	8.95	21.63	59 df 0.0001 ***
Skill	3.61	0.76	6.46	0.69	2.85	17.42	59 df 0.0001 ***

**\*\*\*p<0.001**

**Table :4** Shows that the mean pretest knowledge score was  $12.73 \pm 1.81$  and the post test score was  $21.68 \pm 1.72$  the mean difference was high and statistical significant the hands on training regarding BLS improved the knowledge regarding BLS among final year B.Sc. Nursing students.

The pre test mean skills core was  $3.61 \pm 0.76$  and the post test score was  $6.46 \pm 0.69$ . The mean difference was high statistically significant. This indicates that the hands on training regarding BLS improved the skill regarding BLS among final year B.Sc. Nursing students

## SECTION-V

**TABLE :5 Data pertaining to association between posttest level of knowledge with the selected Socio demographic variables among final year B.Sc. Nursing students**

### Testing of hypothesis

**H<sub>2</sub>:** There is a significant association between the post test level of knowledge with selected socio demographic variables.

**N= 60**

S.No	Variables	Level of knowledge			$\lambda^2$	P
		Adequate	Moderately adequate	Inadequate		
1	Sex					
	a) Male	12	3	0	0.952	1 df 0.3292
	b) Female	30	15	0		
2	Previous source of information regarding BLS					
	a) Class room	36	5	0	19.59	2 df 0.00005 ***
	b) Internet	2	5	0		
	c) Journal	4	8	0		
3	Class room performance					
	a) Above average > 80%	11	2	0	9.646	2 df 0.00804 **
	b) Average 50- 80%	30	11	0		
	c) Below average<80%	1	5	0		
4	Students interest in emergency care					
	a) No interest	14	11	0	4.816	2 df 0.0899
	b) Moderate interest	10	4	0		
	c) High interest	18	3	0		
5	Area of maximum experience					
	a) General ward	16	9	0	4.000	2 df 0.13533
	b) Emergency ward	8	0	0		
	c) OPD	18	9	0		
6	Previous experience on BLS					
	a) Not witnessed	7	11	0	12.435	2df 0.00195 **
	b) Witnessed	18	5	0		
	c) Performed	17	2	0		

\*\*\*p<0.001, \*\*p<0.01

**Table-7:** Shows that there is a significant association between the post test level of Knowledge regarding BLS among the final year B.Sc. Nursing Students and their selected demographic variables like Previous source of information regarding BLS (0.00005\*\*\*), Class room performance(0.00804\*\*) and Previous experience on BLS (0.00195\*\*)

## SECTION VI

**TABLE 6 Data pertaining to association between posttest level of skill and selected demographic variables among final year B.Sc. Nursing students**

### Testing of hypothesis

H<sub>2</sub>: There is a significant association between the post test levels of skills with selected socio demographic variables.

S.No	Variables	Level of knowledge			$\chi^2$	P
		Adequate	Moderately adequate	Inadequate		
1	Sex a) Male b) Female	12 29	3 16	0 0	1.258	1 df 0.26203
2	Previous source of information regarding BLS a) Class room b) Internet c) Journal	35 2 4	6 5 8	0 0 0	17.41	2 df 0.0001 ***
3	Class room performance a) Above average > 80% b) Average 50- 80% c) Below average < 80%	11 29 1	2 12 5	0 0 0	9.103	2 df 0.0105 *
4	Students interest in emergency care a) No interest b) Moderate interest c) High interest	14 10 17	11 4 4	0 0 0	3.365	2 df 0.185
5	Area of maximum experience a) General ward b) Emergency ward c) OPD	16 8 17	9 0 10	0 0 0	4.284	2 df 0.1174
6	Previous experience on BLS a) Not witnessed b) Witnessed c) Performed	7 18 16	11 5 3	0 0 0	10.47 3	2df 0.0053 **

\*\*\*p<0.001, \*\*p<0.01, \*p<0.05

**Table-6:** Shows that there is a significant association between the post test level of skill regarding BLS among the final year B.Sc. Nursing Students and their selected demographic variables like previous source of information regarding BLS (0.001\*\*\*), Class room performance(0.0105\*)and Previous experience on BLS (0.0053\*\*)

## **SUMMARY**

This chapter dealt with analysis and interpretation of data obtained by the researcher. The analysis of the result showed that the hands on training on BLS among final year B.Sc. Nursing students improved the knowledge and skills regarding BLS.

## **CHAPTER V**

### **DISCUSSION**

This chapter deals with the discussion of the data analyzed based on the objectives and hypotheses of the study. The problem stated was “A study to evaluate the effectiveness of hands on training on knowledge and skill regarding Basic Life Support among final year B.Sc. Nursing students in Annammal College of Nursing, Kuzhithurai at Kanyakumari District”. The discussion was based on the objectives of the study and the hypotheses mentioned in the study.

#### **OBJECTIVES OF THE STUDY**

- To assess the pre test and post test level of knowledge and skill regarding Basic life support among final year B.Sc. Nursing students.
- To evaluate the effectiveness by comparing the pre test and post test level of knowledge and skill among final year B.Sc. Nursing students.
- To find out the association between the post test level of knowledge and Skill regarding Basic life support among final year B.Sc. Nursing students with their selected socio demographic variables.

#### **SOCIO DEMOGRAPHIC VARIABLES OF FINAL YEAR B.Sc. NURSING STUDENTS**

It represents the frequency and percentage distribution of final year B.Sc. Nursing students with selected socio demographic variables such as Sex, Previous source of information regarding BLS, Class room performance, Student's interest in emergency care, Area of maximum experience and Previous experience on BLS.

With regard to sex, majority of 45(75%) were females and least of 15(25%) were males. With regard to previous source of information regarding BLS, majority of 41(68.33%) were acquired from class room, 12(20%) through journal and 7(11.7%) through internet. With regard to class room performance, majority of 41(68.33%) were average (50-80%), 13 (21.67%) were above average (>80%), 6 (10%) were below average. With regard to student's interest in emergency care, majority of 25(41.67%) were not interested, 21 (35%) had high interest and 14 (23.33%) had moderate interest in emergency care. With regard to area of maximum experience, majority of 27(45%) had experience in OPD, 25 (41.67%) were from general ward and least 8 (13.33%) were from

emergency ward. With regard to previous experience on BLS majority 23 (38.33%) were witnessed, 19 (31.67%) were performed and 18 (30%) are not witnessed.

**Objective 1: To assess the pre test and post test level of knowledge and skill regarding Basic life support among final year B.Sc. Nursing students.**

The data on pretest and posttest level of knowledge and skill regarding BLS among final year B.Sc. Nursing students were analyzed.

Regarding knowledge on BLS, pretest results showed that majority of the students 27(45%) had moderately adequate knowledge, 25(41.67%) had inadequate knowledge and only 8(13.33%) had adequate knowledge. Whereas in the posttest 42(70%) had adequate knowledge, 18(30%) had moderately adequate knowledge and no one had inadequate knowledge.

Regarding skill on BLS, pre test results revealed that majority of the students 27(45%) had inadequate skill, 24(40%) had moderately adequate skill and only 9(15%) had adequate skill. During the post test, 41(68.33%) had adequate skill, 19(31.67%) had moderately adequate skill and no one had inadequate skill.

**Objective 2: To evaluate the effectiveness by comparing the pretest and post test level of knowledge and skill among final year B.Sc. Nursing students.**

Analyzing the data the mean pretest knowledge score was  $12.73 \pm 1.81$  and the post test score was  $21.68 \pm 1.72$  with the mean difference 8.95 which was high and statistically significant. Hence the hands on training on BLS improved the knowledge regarding BLS among final year B.Sc. Nursing students.

Regarding the skill on BLS, the pre test mean skills score was  $3.61 \pm 0.76$  and the post test score was  $6.46 \pm 0.69$  with the mean difference 2.85 which was high and statistically significant. This indicates that, the hands on training on BLS improved the skill regarding BLS among final year B.Sc. Nursing students. Hence the research hypothesis  $H_1$  was accepted.



**Objective 3: To find out the association between the post test level of Knowledge and Skill regarding Basic life support among final year B.Sc. Nursing students with their selected socio demographic variables.**

It represents the summary of chi-square analysis, which was used to bring out the association between the post test level of knowledge and skill among final year B.Sc. Nursing students and their selected socio demographic variables

In this study there is a significant association between the post test level of Knowledge regarding BLS among the final year B.Sc. Nursing students and their selected demographic variables like Previous source of information regarding BLS (0.00005\*\*\*), Class room performance (0.00804\*\*) and Previous experience on BLS (0.00195\*\*)

In respect to skill on BLS, there is a significant association between the post test level of skill regarding BLS among the final year B.Sc. Nursing students and their selected demographic variables like previous source of information regarding BLS (0.001\*\*\*), Class room performance (0.0105\*) and Previous experience on BLS (0.0053\*\*). Hence the research hypothesis H<sub>2</sub> was accepted.

## **SUMMARY**

This chapter dealt with the objectives of the study, major findings of the selected demographic variables of final year B.Sc. Nursing students, description of effectiveness of hands on training on knowledge, skill regarding BLS and association between post test level of knowledge and skill score regarding BLS among final year B.Sc. Nursing students with selected socio demographic variables.

## **CHAPTER VI**

### **SUMMARY, CONCLUSION, NURSING IMPLICATIONS AND RECOMMENDATIONS**

This chapter deals with the summary of the study, findings, conclusion drawn from the study, nursing implications and recommendations of the study.

#### **SUMMARY**

The summary includes the objectives of the study, description of procedure used, major findings conclusion and recommendations for further research study. The present study is, “A study to evaluate the effectiveness of hands on training on knowledge and skill regarding Basic life support among final year B.Sc. Nursing students in Annammal College of Nursing, Kuzhithurai at Kanyakumari District.

#### **THE OBJECTIVES OF THE STUDY**

- To assess the pre test and post test level of knowledge and skill regarding Basic life support among final year B.Sc. Nursing students.
- To evaluate the effectiveness by comparing the pre test and post test level of knowledge and skill among final year B.Sc. Nursing students.
- To find out the association between the post test level of knowledge and skill regarding Basic life support among final year B.Sc. Nursing students.

#### **HYPOTHESES**

H1: There will be a significant difference between the pretest and posttest level of knowledge

and skill regarding Basic life support.

H2: There will be a significant association between posttest level of knowledge and skill with

selected socio demographic variables.

#### **The conceptual framework**

The conceptual framework selected for this study is based on “General system theory by Ludwingn VonBerlanffy (1968). General systems Theory explain that, a system is a set interrelated element.

The investigator organized the **Review of literature** under the following headings:

- I. Empirical studies related to the knowledge of nursing students regarding CPR.

- II. Empirical studies related to knowledge of nursing staff and health professional regarding CPR.
- III. Empirical studies related to effectiveness of teaching programmes regarding CPR.

The study was conducted among final year B.Sc. Nursing students in Annammal college of nursing, Kuzhithurai to evaluate the effectiveness of hands on training on knowledge and skills regarding basic life support. The tools used for data collection were socio demographic proforma, structured knowledge questionnaire and observational checklist. The knowledge questionnaire consisted of 25 questions, each item carries 1 mark for correct answer and 0 for incorrect answer. The scoring and interpretation was for adequate knowledge 76% to 100%, moderately adequate knowledge was 51% to 75% and for inadequate knowledge below 50%.

Content validity was obtained from 6 experts in nursing field, one cardiologist and from one statistician. Pilot study was conducted in Annammal college of nursing, Kuzhithurai during the month of November for a period of one week. Content was found to be reliable and feasible. Reliability of the tool was calculated by test retest method. Data collection was conducted during the month of January with duration of one month. Samples were selected from Annammal college of Nursing. Non probability convenient sampling technique was used to draw 60 samples from the study population. Pre test was conducted among final year B.Sc. Nursing students by using structured knowledge questionnaire and check list, Hands on training on BLS was explained on the same day. Post test was assessed after 7<sup>th</sup> day of intervention by using the same tools. Collected data were analyzed and interpreted as per the objectives of the study by using the descriptive statistics (frequency, percentage, mean and median) and also by using inferential statistics (chi-square) methods after careful editing, coding and tabulated

## **FINDINGS**

Major findings of the study are presented under the followings:

### **1. Findings related to socio demographic variables of final year B.Sc. Nursing students.**

It represent the frequency and percentage distribution of final year B.Sc. Nursing students with selected socio demographic variables such as Sex , Previous source of information

regarding BLS, Class room performance, Student's interest in emergency care, Area of maximum experience and Previous experience on BLS.

With regard to sex, majority of 45(75%) were females and least of 15(25%) were males. With regard to previous source of information regarding BLS, majority of 41(68.33%) were acquired from class room, 12(20%) through journal and 7(11.7%) through internet. With regard to class room performance, majority of 41(68.33%) were average (50-80%), 13 (21.67%) were above average (>80%), 6 (10%) were below average. With regard to student's interest in emergency care, majority of 25(41.67%) were not interested, 21 (35%) had high interest and 14 (23.33%) had moderate interest in emergency care. With regard to area of maximum experience, majority of 27(45%) had experience in OPD, 25 (41.67%) were from general ward and least 8 (13.33%) were from emergency ward. With regard to previous experience on BLS majority 23 (38.33%) were witnessed, 19 (31.67%) were performed and 18 (30%) are not witnessed.

## **2) Findings related to frequency and percentage distribution of pretest and posttest level of knowledge regarding BLS among the final year B.Sc. Nursing students.**

Regarding knowledge on BLS, pretest results showed that majority of the students 27(45%) had moderately adequate knowledge, 25(41.67%) had inadequate knowledge and only 8(13.33%) had adequate knowledge. Whereas in the posttest 42(70%) had adequate knowledge, 18(30%) had moderately adequate knowledge and no one had inadequate knowledge.

## **3) Findings related to frequency and percentage related distribution of pretest and post test level of skills regarding BLS among final year B.Sc. Nursing students.**

Regarding the skill on BLS, the pre test mean skills score was  $3.61 \pm 0.76$  and the post test score was  $6.46 \pm .69$  with the mean difference 2.85 which was high and statistically significant. This indicates that, the hands on training on BLS improved the skill regarding BLS among final year B.Sc. Nursing students. Hence the research hypothesis  $H_1$  was accepted.

#### **4. Findings related to effectiveness of hands on training on knowledge and skills regarding BLS among final year B.Sc. Nursing students**

Analyzing the data the mean pretest knowledge score was  $12.73 \pm 1.81$  and the post test score was  $21.68 \pm 1.72$  with the mean difference 8.95 which was high and statistically significant. Hence the hands on training on BLS improved the knowledge regarding BLS among final year B.Sc. Nursing students.

Regarding the skill on BLS, the pre test mean skills score was  $3.61 \pm 0.76$  and the post test score was  $6.46 \pm .69$  with the mean difference 2.85 which was high and statistically significant. This indicates that, the hands on training on BLS improved the skill regarding BLS among final year B.Sc. Nursing students. Hence the research hypothesis  $H_1$  was accepted.

#### **5. Findings related to association between posttest level of knowledge and in selected Socio demographic variables among final year B.Sc. Nursing students.**

The result showed that there is a significant association between the post test level of Knowledge regarding BLS among the final year BSC nursing students and their selected demographic variables like Previous source of information regarding BLS (0.00005\*\*\*), Class room performance (0.00804\*\*) and Previous experience on BLS (0.00195\*\*)

#### **6. Finding related to association between posttest level of skill and selected socio demographic variables among final year B.Sc. Nursing students.**

There is a significant association between the post test level of skill regarding BLS among the final year B.Sc. nursing students and their selected socio demographic variables like previous source of information regarding BLS (0.001\*\*\*), Class room performance (0.0105\*) and Previous experience on BLS (0.0053\*\*)

## **IMPLICATIONS OF THE STUDY**

Based on the findings the researcher recommended the implications on Nursing practice, Nursing education and Nursing administration and nursing research.

### **IMPLICATIONS TO NURSING PRACTICE**

- ❖ Nursing students need understanding of BLS and ability to perform BLS psychomotor skills
- ❖ Nursing Students should complete BLS course prior to entering nursing program or beginning their clinical practice
- ❖ The nurse should have the ability to perform BLS in critical care settings.

### **NURSING EDUCATION**

- ❖ As the change begins with education, INC and universities should increase the theory and also practical hours in emergency care unit.
- ❖ The student nurses from the Schools & Colleges of Nursing should be encouraged to attend specialized seminars regarding BLS
- ❖ Nurse educator should come forward to involve their students in clinical work
- ❖ Nursing students should be taught about the importance and needs of Basic life support
- ❖ Arrange workshops for the students to participate, so that they gain information about Basic life support.
- ❖ Nurse educators must arrange facilities and opportunities for special educators and nursing personnel to attend the workshop and conferences to update their knowledge regarding the importance of BLS.

### **IMPLICATION TO NURSING ADMINISTRATION**

- ❖ This study helps the nurse administrator to assess the knowledge and skills for nurses.
- ❖ This enables the nurses to update the knowledge.
- ❖ The nurse administrator can conduct in-service education program on basic life support.

## **IMPLICATION TO NURSING RESEARCH**

- ❖ There is a need for extensive and intensive research in this area so that strategies for education nurses
- ❖ This study will serve a valuable reference material for future investigators.
- ❖ Developing research would help nurse to deal efficiently and effectively thus reducing morbidity and mortality rates due to cardiac arrest
- ❖ The study findings help to expand the knowledge and skills upon which further research can be conducted.
- ❖ The study finding will motivate the initial researchers to conduct the same study on large scale
- ❖ Disseminate the findings of research through conferences, seminars, and publishing in nursing journals.

## **RECOMMENDATIONS**

- ❖ Similar study can be conducted with large sample in different settings.
- ❖ A comparative study can be conducted among final year B.Sc. Nursing students and third year B.Sc. Nursing students.

## **CONCLUSION**

The overall experience of conducting the study was new experience for the investigator in the field of research. The constant encouragement and the direction of guides, co-operation of respondents to participate in the study contributed to the fruitful and successful completion of the study.

## ANNEXURE I

### LETTER SEEKING PERMISSION TO CONDUCT THE STUDY

From  
S.Jelin Selva,  
M.Sc.(N) II year,  
Annammal college of Nursing,  
Kuzhithurai.

To  
The Principal,  
Annammal College of Nursing,  
Kuzhithurai.

Respected Madam,

Sub: Seeking permission to conduct the research study.

I Mr.S.Jelin Selva,II year M.Sc (N) student of Annammal College of Nursing, Kuzhithurai, approaching you to conduct a research on "A study to evaluate the effectiveness of hands on training on knowledge and skills regarding Basic life support among final year B.Sc Nursing students in our student" which I want to complete as a partial fulfilment of university requirement for the award of Master of Science in Nursing degree.


In this regards, I humbly request you to give permission to conduct the study in our institution.

Thanking you

15-12-2014  
Kuzhithurai

Yours faithfully,

  
S.Jelin Selva

  
Principal  
Annammal College of Nursing  
Kuzhithurai, K.K. Dist.,- 629 163



## ANNEXURE II

### LETTER GRANTING PERMISSION TO CONDUCT THE STUDY



## *Annammal College of Nursing*

(Approved by Govt. of Tamilnadu, TN Nurses & Midwives Council,  
Indian Nursing Council and Affiliated to The Tamilnadu Dr. MGR Medical University)

Annammal Hospital Campus, KUZHITHURAI - 629 163  
K.K. Dist, Tamil Nadu. Ph : 04651 - 260614, Fax : 04651 - 260605

www.annammalnursing college.com Email : annammalcollege2007@yahoo.co.in

Dr. Sheeba Jayalal MBBS, DGO  
Chairperson

Date : .....  
22-12-2014

#### TO WHOM SOEVER IT MAY CONCERN

Jelin Selva. S a student of M.Sc(Nursing) program from Annammal College of Nursing, Kuzhithurai., conducted a study on

“A Study to evaluate the effectiveness of hands on training on knowledge and skills regarding Basic Life support among final year B.Sc Nursing students at Annammal College of Nursing, Kuzhithurai, Kanyakumari District”.

As part of his study, he educated the students regarding Basic Life Support. Also he conducted his research in our college in an excellent manner with good dedication and in a pleasant way.

We wish all the very best to Jelin Selva.S for a very successful and fruitful career.



Principal

Annammal College of Nursing  
Kuzhithurai, K.K. Dist., - 629 163

*Our Motto : "Lead us to Lead others"*

*"What we are is gift of god and What we become is gift to god"*

## ANNEXURE III

### ETHICAL COMMITTEE LETTER

#### ETHICAL CLEARANCE CERTIFICATE

Valid from : 2014

Valid to : 2015

Name of the Investigator: S. Jelin Selva

The Ethical committee meeting held on 07-03-2014, had reviewed the project titled "A study to evaluate the effectiveness of hands on training on knowledge and skills regarding Basic Life Support among final year B. Sc nursing students in selected nursing colleges at Kanyakumari District". The proposal was submitted before the ethical committee for the acceptance and found to be acceptable on ethical grounds. The ethical committee held responsibility and accountability for the investigator for any other administrative/regulatory approvals that may pertain to this research. This has to be carried out according to the conditions outlined in the original protocol submitted for ethical review.

This certificate of approval is valid for the time period provided, there is no change in the methodology protocol or consent process and documents.

Any significant change should be reported to guide for its considerations in advance for its implementation.




Signature of Research Committee members:

1. Dr. SheebaJayalal M.B.B.S.,D.G.O.,  
Chief Medical Officer
2. Dr. Jayalal M.S.,F.I.C.S.,(Germany),M.B.A.,F.I.A.G.E.S  
Chief Surgeon
3. Dr. Solomon M.B.B.S  
Physician
4. Dr. ShanthiAppavu M.Sc (N)., PhD  
Nursing Research Advisor
5. Prof.Mrs.J.M. Jerlin Priya M.Sc (N).,PhD  
Guide



## ANNEXURE IV

### LETTER SEEKING EXPERTS OPINION FOR THE VALIDITY OF THE TOOL

	<b>Annammal College of Nursing</b> (Approved by Govt. of Tamilnadu, TN Nurses & Midwives Council, Indian Nursing Council and Affiliated to The Tamilnadu Dr. MGR Medical University) Annammal Hospital Campus, KUZHITHURAI - 629 163 K.K. Dist, Tamil Nadu. Ph : 04651 - 260614, Fax : 04651 - 260605 www.annammalnursingcollege.com Email : annammalcollege2007@yahoo.co.in
	<b>Dr. Sheeba Jayalal</b> MBBS, DGO Chairperson
Date : .....	
To	
Madam/Sir,	
Sub: M.Sc Nursing Programme-Dissertation-Validation of study tool request-reg.	
Mr. Jelin Selva S. a bonafide II year M.Sc Nursing student of Annammal College of Nursing is approaching you to obtain validation his study tool pertaining to his dissertation in partial fulfillment of the requirements for the degree of Master of Science in Nursing. The selected topic is	
"A study to evaluate the effectiveness of hands on training on knowledge and skill regarding Basic life support among internship students in selected nursing colleges at Kanyakumari District."	
In this regard I request you to kindly extend possible technical guidance and support for successful completion of dissertation.	
I enclosed here with a checklist for your evaluation.	
Thanking you	
Yours sincerely,	
 Principal Annammal College of Nursing Kuzhithurai, K.K. Dist., - 629 163	
	
<i>"What we are is gift of god and What we become is gift to god"</i>	

## ANNEXURE V

### EVALUATION CRITERIA CHECKLIST FOR VALIDATING THE TOOL

#### Instructions:

The expert is requested to go through the following criteria for evaluation. Three columns are given for responses and a column for remarks. Kindly place tick mark in the appropriate column and give remarks.

#### Interpretation of column:

Column I : Meets the criteria.

Column II : Partially meets the criteria.

Column III : Does not meet the criteria.

S. No	CRITERIA	1	2	3	REMARKS
1	Content <ul style="list-style-type: none"><li>• Adequacy</li><li>• Relevance</li><li>• Organized</li></ul>				
2	Language <ul style="list-style-type: none"><li>• Simplicity</li><li>• Clarity</li><li>• Relevant</li></ul>				
3	Scoring <ul style="list-style-type: none"><li>• Easy To Score</li><li>• Clarity</li></ul>				
4	Practicability <ul style="list-style-type: none"><li>• Procedure</li><li>• Utility</li><li>• Feasibility</li></ul>				

Signature :

Name :

Designation :  
expert

Signature of the

**ANNEXURE VI**  
**LIST OF EXPERTS**

---

- 1. Dr.Jacob Justin MBBS MD, DM,**  
Cardiologist,  
Jacob Hospital,  
Kuzhithurai,  
Kanyakumari District.
- 2. Dr. (Mrs.) S.S Sharmila Jansi Rani, M.Sc (N), Phd.,**  
Professor,  
Christian College of Nursing,  
Neyyoor,  
Kanyakumari District.
- 3. Mr. George, M.Sc, (N).**  
Professor,  
St. Xavier's Catholic College of Nursing,  
Chunkankadai,  
Kanyakumari District.
- 4. Mr. Joseph Merlin, M.Sc, (N).**  
Asst.Professor,  
Saraswathy College of Nursing,  
Parassala,  
Trivandrum District.
- 5. Mrs. AjithaJothy, S.T M.Sc, (N),**  
Asso.Professor,  
CSI College of Nursing,  
Karakonam  
Trivandrum District.

**6. Mrs. Sheeba, M.Sc, (N)**

Reader

Christian college of Nursing,

Neyyoor,

Kanyakumari District.

**7. Mrs. Sherlin, M.Sc, (N),**

Asst. Professor,

CSI College of Nursing,

Karakonam,

Trivandrum District.

**8. Mr. Anto John Britto, M.Sc., M.Ed., M.Phill., P.G., BBM.,**

Bio Statistician,

Scott Christian College,

Nagercoil,

Kanyakumari District.

## ANNEXURE VII

### CERTIFICATE OF BLS TRAINING

	
<p><i>This is to certify that</i></p>	
<p><u>Mr. S. JELIN SELVA.</u></p>	
<p><i>has completed training in</i></p>	
<p><u>"BASIC LIFE SUPPORT".</u></p>	
<p><i>held on</i> <u>23.11.2014.</u></p>	
 <b>Dr. N. Ramakrishnan</b> Managing Director TACT Academy for Clinical Training <a href="http://www.tact-india.com">www.tact-india.com</a>	 <b>Dr. Renu Devaprasath</b> Chairperson JMT - TACT Academy for Clinical Training <a href="http://www.jeyasekharanmedicaltrust.com">www.jeyasekharanmedicaltrust.com</a>
<p>(Valid for two years)</p>	

## **ANNEXURE VIII**

### **RESEARCH PARTICIPANT CONSENT FORM**

Dear participant,

I am S. Jelin Selva M.Sc, Nursing student of Annammal College of Nursing, Kuzhithurai. As part of my study, a research on “A study to evaluate the effectiveness of hands on training on knowledge and skills regarding Basic Life Support among final year B.Sc. Nursing students in selected nursing colleges at Kanyakumari District” would be conducted among you. In this regard, I seek your consent and co-operation to participate in the study. Please be frank and honest in your response. The information collected will be kept confidential and anonymity will be maintained.

Signature of the  
researcher

I..... hereby give my consent to participate and undergo the study.

Place:

Date:

Signature of the  
participant



## ANNEXURE IX

### CERTIFICATE FOR ENGLISH EDITING

#### CERTIFICATE OF ENGLISH EDITING

To whom so ever it may concern

This is to certify that the dissertation, "A study to evaluate the effectiveness of hands on training on knowledge and skills regarding Basic Life Support among final year B.Sc. Nursing students in selected Nursing colleges at K.K Dist", by Mr. S. Jelin Selva, 2<sup>nd</sup> year M.Sc (N) student, Annammal college of Nursing was edited for English Language appropriateness by Sybil Reena Leitch P.G. Asst. L.M.S G.H.SS

Marthandam

Sybil Reena Leitch  
Signature

**. ANNEXURE X**

**CERTIFICATE OF STATISTICAL ANALYSIS AND INTERPRETATION**

**CERTIFICATE OF STATISTICAL ANALYSIS**

**To whom so ever it may concern**

This is to certify that the dissertation, "A study to evaluate the effectiveness of hands on training on knowledge and skills regarding Basic Life Support among final year B.Sc. Nursing students in selected Nursing colleges at K.K Dist" by Mr. S. Jelin Selva has been checked for the accuracy of statistical analysis and interpretation and was apt for its purpose.

*[Signature]*  
Signature

P. Anbo Paulin Brinto  
Asst. Prof of Biostatistics  
Scott Christian College,  
Nagercoil.

**ANNEXURE XI**  
**TOOL FOR DATA COLLECTION**

**PART I**

**SOCIO DEMOGRAPHIC VARIABLE PROFORMA**

**Instructions**

**Read the following carefully put the ( ✓ ) tick the appropriate option**

1) Sex

- a) Male ☐
- b) Female ☐

2) Previous source of information regarding BLS

- c) Class room ☐
- d) Internet ☐
- e) Journals ☐

3) Class room performance

- a) Above average 80% ☐
- b) Average 50 – 80% ☐
- c) Below average 50% ☐

4) Student's interest in emergency care

- a) No interest ☐
- b) Moderate interest ☐
- c) High interest ☐

5) Area of maximum experience

- a) General ward ☐
- b) Emergency ward ☐
- c) OPD ☐

6) Previous experience on BLS

a) Not witnessed

☐

b) Witness

☐

c) Performed

☐

## PART II

### KNOWLEDGE QUESTIONNAIRE ON BLS

#### Instructions

Choose the appropriate answer and tick (✓) in the given space provided

1. Expansion of BLS
  - a) Basic Life Support ☐
  - b) Basic Life Saving ☐
  - c) Body Life Support ☐
2. Expansion of CPR
  - a) Cardio Pulmonary Response ☐
  - b) Cardio Pulmonary Resuscitation ☐
  - c) Cardio Protective Resolution ☐
3. BLS is indicated when
  - a) Patient is Unresponsive and have pulse ☐
  - b) Patient is Unresponsive and have no pulse and respiration ☐
  - c) Patient is Unresponsive ☐
- 4) Which of the following victims need CPR
  - a) A victim with chest pain and indigestion ☐
  - b) A victim who is unresponsive but is breathing adequately ☐
  - c) A victim who is unresponsive with no breathing and no pulse ☐
- 5) Contraindication of BLS
  - a) Hypertension ☐
  - b) Pacemaker ☐
  - c) Diabetes mellitus ☐
6. Which of the following is appropriate protection during CPR
  - a) Gloves and breathing device ☐

b) A gown ☐

c) Gloves and a gown ☐

7. The sequence of BLS

a) Airway, Breathing, Chest compression ☐

b) Chest compression, airway, breathing ☐

c) Airway, breathing, circulation ☐

8. The initial basic life support (BLS) steps for adults

a) Assess the victim give 2 rescue breaths, defibrillate, start CPR ☐

b) Assess the victim activates EMS and get the AED, check pulse start CPR ☐

c) Check pulse, give rescue breaths, assess the victim, defibrillate ☐

9). Airway can be opened by

a) Head tilt and chin lift manoeuvre ☐

b) Bag mask ☐

c) Pocket mask ☐

10) What are the three steps to check for a victim breathing?

a) Look, listen and feel ☐

b) Listen, breathe and exhale ☐

c) Look, listen and exhale ☐

11) For an unresponsive patient, chest compression should be started within

a) 10 sec ☐

b) 10 min ☐

c) 30 sec ☐

12). For CPR the rescuer hand should be placed on

- a) Xiphoid sternum ☐
- b) Lower half - at the sternum ☐
- c) Middle half – at the sternum ☐

13) The rate of chest compression for an order

- a) 30/min ☐
- b) 100/min ☐
- c) 30:2/min ☐

14) The ratio of chest compression and rescue breath should be.....for an adult

- a) 15:2 ☐
- b) 30:2 ☐
- c) 100:2 ☐

15). The depth of chest compression for an adult

- a) 5cms ☐
- b) 2cms ☐
- c) 3cms ☐

16). Chest compression during CPR should be

- a) Gentle and slow with frequent interruptions for the pulse check ☐
- b) Gentle and slow and interrupted as little as possible ☐
- c) Hard and fast interrupted as little as possible ☐

17) How do you give mouth to mouth breathing?

- a) Put your lips in the victim's lips ☐
- b) Seal your lips around the outside of the victim's lip ☐

- c) Place a breathing tube in the airway ☐

18. While giving rescue breath

- a) Check the pulse ☐
- b) Watch for chest to rise ☐
- c) Give CPR continuously ☐

19). How can you say if ventilations are going into a victim

- a) Watch for chest rise ☐
- b) Watch for abdominal rise ☐
- c) Listen for victim exhaling air ☐

20. When a child has heart rate greater than 60 per minute and a pulse but is not breathing, effectively the rescuer should

- a) Give breaths without chest compression ☐
- b) Give chest compression without breaths ☐
- c) Give breaths and chest compression ☐

21. If a victim of foreign body airway obstruction becomes unresponsive, the rescuer should immediately

- a) Start CPR beginning with compression ☐
- b) Tell the victim's doctor ☐
- c) Perform abdominal thrusts ☐

22. You are performing 2 – rescuer CPR. You are positioned at victim's head, how many breaths should you give after each set of compression

- a) 1 ☐
- b) 2 ☐
- c) 3 ☐



23. Gastric inflation is more likely to occur if the rescuer

- a) Gives breaths too quickly or with too much force ☐
- b) Gives each breath over 1 second ☐
- c) Does not make a good seal between face and mask ☐

24). Complication of BLS

- a) Rib fracture ☐
- b) Pulmonary embolism ☐
- c) Seizure ☐

25) High quality CPR

- a) Improve quality of pulse ☐
- b) Improve blood circulation to heart ☐
- c) Improve chance of survival ☐

### **SCORING FOR KNOWLEDGE QUESTIONNAIRE**

SCORE 1 - Correct answer

SCORE 0 - Wrong answer

### **SCORING INTERPRETATION**

Adequate knowledge – 76 to 100 %

Moderately adequate knowledge – 51 to 75 %

Inadequate knowledge - below 50 %

### PART – III

#### OBSERVATIONAL CHECK LIST

The researcher will put a tick mark (√) against the observation noted.

SL NO	STATEMENTS	PRE TEST	POST TEST
1.	ASSESS : Checks for response and for no breathing or no normal breathing, only gasping ( at least 5 seconds but not more than 10 seconds)		
2.	ACTIVATES emergency response system		
3.	Checks for PULSE (not more than 10 seconds)		
4.	GIVES QUALITY HEALTH CPR:		
	CORRECT COMPRESSION		
	<ul style="list-style-type: none"><li>HAND PLACEMENT</li></ul>		
	<ul style="list-style-type: none"><li>ADEQUATE RATE: At least 100/min (ie., delivers each set of 30 chest compressions in 18 seconds or less)</li></ul>		
	<ul style="list-style-type: none"><li>ADEQUATE DEPTH: Delivers compressions at least 5cm(2 inches) in depth(at least 23 out of 30)</li></ul>		
	<ul style="list-style-type: none"><li>ALLOWS COMPLETE CHEST RECOIL (at least 23 out of 30)</li></ul>		
	<ul style="list-style-type: none"><li>MINIMIZES INTERRUPTIONS: Gives 2 breaths with pocket mask in less than 20 seconds</li></ul>		

#### SCORING

< 3 →Inadequate

4 – 6 →Moderately adequate

> 7 →Adequate

## **ABSTRACT**

### **EFFECTIVENESS OF HANDS ON TRAINING ON KNOWLEDGE AND SKILLS REGARDING BASIC LIFE SUPPORT AMONG FINAL YEAR B.Sc. NURSING STUDENTS IN ANNAMMAL COLLEGE OF NURSING, KUZHITHURAI AT KANYAKUMARI DISTRICT.**

## **INTRODUCTION**

Nurses are an integral part of the health care system and are perceived knowledgeable in providing institutional care to the patients. Cardio Pulmonary Resuscitation (CPR) is an important medical procedure which is needed for individuals who face sudden cardiac arrest. It is the combination of rescue breathing and chest compressions which is delivered to the victims who are thought to be in cardiac arrest. The timely performed CPR can largely prevent sudden death and hence it is considered to be an important medical procedure.

The air we breathe in travel to our lungs where oxygen is picked up by our blood and then pumped by the heart to our tissues and organs. When a person experiences cardiac arrest—whether due to heart failure in adults and the elderly or an injury such as near drowning, electrocution or severe trauma in a child—the heart goes from the normal beat to an arrhythmic pattern called ventricular fibrillation, and eventually ceases to beat altogether. This prevents oxygen from circulating throughout the body. Cardio (heart) Pulmonary (lung) Resuscitation (revive, revitalize) serves as an artificial respirator. CPR may not save the victim even when performed properly, but if started within 4 minutes of cardiac arrest and defibrillation is provided within 10 minutes, a person has a 40% chance of survival. CPR is a simple but effective procedure that allows almost anyone sustains life in the first critical minutes of cardiac arrest.

**Endale and Bernard andersan (2011)** conducted a study about the knowledge level of final year undergraduate health science students and medical interns about cardio pulmonary resuscitation. In his findings he states that the knowledge of nursing students and interns about BLS was very poor. Several authors described the problem of poor performance in CPR, even when provided by medical professionals. Numerous investigations have reported the problem of poor skills retention after various CPR

courses. Studies reporting the need for improvement of resuscitation techniques led to the recent changes in BLS. Early initiation of CPR improves the chance of successful resuscitation and survival. Basic Life Support training is highly essential for all health care staff members; especially to those who are working in Emergency and Critical care units because protocol based management avoids confusion, wastage of time which in turn can save many lives. Nurses play an important role in emergency management. In order to have efficient, qualified and skilled nurses, it should mainly focus on nursing educational system and the process of Basic Life Support training should start from the student nurses because they are the future back bone of the hospital that will render services during the emergency.

### **STATEMENT OF THE PROBLEM**

A study to evaluate the effectiveness of hands on training on knowledge and skills regarding Basic Life Support among final year B.Sc. Nursing students in Annammal College of Nursing, Kuzhithurai at Kanyakumari District.

### **OBJECTIVES OF THE STUDY**

- To assess the pretest and posttest level of knowledge and skills regarding Basic Life Support among final year B.Sc. Nursing students in selected nursing colleges.
- To evaluate the effectiveness by comparing the pretest and posttest level of knowledge and skills among final year B.Sc. Nursing students in selected nursing colleges.
- To find out the association between the posttest level of knowledge and skills regarding Basic Life Support among final year B.Sc. Nursing students with their selected socio demographic variables.

### **HYPOTHESES**

- H<sub>1</sub>:** There will be a significant difference between the pretest and posttest level of knowledge and skills regarding Basic life support.
- H<sub>2</sub>:** There will be significant association between the posttest level of knowledge and skills with selected socio-demographic variables.

## **RESEARCH METHODOLOGY**

The study was conducted in order to evaluate the effectiveness of hands on training on knowledge and skills regarding Basic Life Support among final year B.Sc. Nursing student's. In this study 60 student's were included who fulfill the inclusive criteria by using non probability convenient sampling technique. Level of knowledge and skills was assessed with the help of knowledge questionnaire, observational check list by the investigator and also socio demographic variables of final year B.Sc. Nursing Students were gathered from the participant's. After the conduction of pretest and posttest, analyzed the data for presence of knowledge and skills. The students cooperated well during data collection periods.

## **DATA ANALYSIS**

Un paired 't' test was used to compare the posttest level of Knowledge and skill. Paired 't' test was used to evaluate the effectiveness Hand on Training. Chi – square test was used to find out the association between the posttest level of knowledge and skill regarding Basic life support with the selected socio demographic variables in final year B.Sc. Nursing Student's.

## **RESULT AND SUMMARY**

The objective of the study was to evaluate the effectiveness of hands on training on knowledge and skills regarding Basic Life Support among final year B.Sc. Nursing students in Annammal College of Nursing, Kuzhithurai at Kanyakumari District.

By comparing the pretest and posttest level of knowledge and skills among final year B.Sc. Nursing students, Chi square test reveled that there is a significant association between the post test level of Knowledge regarding BLS among the final year BSC nursing students and their selected socio demographic variables like Previous source of information regarding BLS (0.00005\*\*), Class room performance (0.00804\*) and Previous experience on BLS (0.00195\*\*)

There is a significant association between the post test level of skill regarding BLS among the final year BSC nursing students and their selected socio demographic variables

like previous source of information regarding BLS (0.001\*\*), Class room performance(0.0105\*)and Previous experience on BLS (0.0053\*\*)

## **CONCLUSION**

The study was concluded that hands on training regarding Basic life support was effective in improving knowledge and skills among final year B.Sc. Nursing Student's .